CHAPTER 3.0

ENVIRONMENTAL EFFECTS FOUND NOT TO BE SIGNIFICANT

SUBCHAPTER 3.1

EFFECTS FOUND NOT TO BE SIGNIFICANT AS PART OF THE EIR PROCESS

CHAPTER 3.0 – ENVIRONMENTAL EFFECTS FOUND NOT TO BE SIGNIFICANT

Subchapter 3.1 discusses resource and service issues that have been determined to be less than significant during the EIR process, based on the level of potential impacts and/or the inclusion of associated project design elements. Specifically, Subchapter 3.1 addresses the issues of air quality, hazards (wildfire), hydrology and water quality, and land use and planning. Subchapter 3.2 discusses environmental issues found to be less than significant during preparation of the Project Initial Study, circulated with the Project NOP (see Appendix A for full text of the NOP and Initial Study). That subchapter contains discussions related to agricultural resources; geology and soils; hazards (hazardous materials, airports, emergency response plans and vectors); hydrology and water quality (groundwater and surface water bodies); land use (community division); mineral resources; noise (groundborne vibration/noise and aircraft); population and housing; public services; recreation; transportation/traffic (air traffic, emergency access, parking and alternative transportation); and utilities and service systems.

3.1 Effects Found Not Significant as Part of the EIR Process

3.1.1 Air Quality

Scientific Resources Associated (SRA) prepared the Air Quality Technical Report and the Global Climate Change Evaluation for the Proposed Project. These reports are summarized in the following discussion, with the complete reports included as Appendices H and I, respectively, of this EIR.

3.1.1.1 *Existing Conditions*

Existing Setting

The project site is located in the San Diego Air Basin (SDAB). The climate of the SDAB is dominated by a semi-permanent high pressure cell located over the Pacific Ocean. This cell influences the direction of prevailing winds (westerly to northwesterly) and maintains clear skies for much of the year. The high pressure cell also creates two types of temperature inversions that may act to degrade local air quality.

Subsidence inversions occur during the warmer months as descending air associated with the Pacific high pressure cell comes into contact with cool marine air. The boundary between the two layers of air creates a temperature inversion that traps pollutants. The other type of inversion, a radiation inversion, develops on winter nights when air near the ground cools by heat radiation and air aloft remains warm. The shallow inversion layer formed between these two air masses also can trap pollutants. As the pollutants become more concentrated in the atmosphere, photochemical reactions occur that produce ozone (O_3), commonly known as smog.

Regulatory Framework

Air Quality

Air quality is defined by ambient air concentrations of specific pollutants identified by the U.S. Environmental Protection Agency (USEPA) to be of concern with respect to health and welfare of the general public. The USEPA is responsible for enforcing the Federal Clean Air Act (CAA) of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no

adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for several pollutants (called "criteria" pollutants). Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere.

The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. The California Air Resources Board (ARB) has established the more stringent California Ambient Air Quality Standards (CAAQS) for the six criteria pollutants through the California Clean Air Act of 1988, and also has established CAAQS for additional pollutants, including sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be "nonattainment areas" for that pollutant. On April 15, 2004, the SDAB was designated a basic nonattainment area for the eight-hour NAAQS for O_3. The SDAB is in attainment for the NAAQS for all other criteria pollutants. The SDAB is currently classified as a nonattainment area under the CAAQS for O_3 and respirable particulate matter smaller than 10 microns in diameter (PM_{10}).

The ARB is the state regulatory agency with authority to enforce regulations to both achieve and maintain the NAAQS and CAAQS. The ARB is responsible for the development, adoption and enforcement of the state's motor vehicle emissions program, as well as the adoption of the CAAQS. The ARB also reviews operations and programs of the local air districts, and requires each air district with jurisdiction over a nonattainment area to develop its own strategy for achieving the NAAQS and CAAQS. The local air district has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations. The Air Pollution Control District (APCD) is the local agency responsible for the administration and enforcement of air quality regulations for San Diego County.

The APCD and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The San Diego County Regional Air Quality Strategy (RAQS) was initially adopted in 1991, and is updated on a triennial basis. The RAQS was last updated in 2009. The RAQS outlines APCD's plans and control measures designed to attain the state air quality standards for O_3. The APCD has also developed the air basin's input to the State Implementation Plan (SIP), which is required under the federal CAA for areas that are out of attainment of air quality standards. The SIP includes the APCD's plans and control measures for attaining the O_3 NAAQS. The SIP is also updated on a triennial basis. The latest SIP update for O_3 attainment was submitted by the ARB to the USEPA in 2007.

The SIP relies on the same information from SANDAG to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin. The SIP also includes rules and regulations that have been adopted by the APCD to control emissions from stationary sources. These SIP-approved rules may be used as a guideline to determine whether a project's emissions would have the potential to conflict with the SIP and thereby hinder attainment of the NAAQS for O_3.

Table 3.1.1-1 presents a summary of the ambient air quality standards adopted by the federal and California Clean Air Acts.

Global Climate Change

Gases that trap heat in the atmosphere are often called "greenhouse" gases (GHGs). GHGs are emitted by both natural processes and human activities. The accumulation of GHGs in the atmosphere regulates the

Earth's temperature. Emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere.

International and Federal Legislation

In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change (IPCC) to assess the scientific, technical and socioeconomic information relevant to understanding the scientific basis for human-induced climate change, its potential impacts, and options for adaptation and mitigation. The most recent reports of the IPCC have emphasized the scientific consensus that real and measurable changes to the climate are occurring; that they are caused by human activity; and that significant adverse impacts on the environment, the economy, and human health and welfare are unavoidable.

In October 1993, President Clinton announced his Climate Change Action Plan (CCAP), which had a goal of returning GHG emissions to 1990 levels by the year 2000. This was to be accomplished through 50 initiatives that relied on innovative voluntary partnerships between the private sector and government aimed at producing cost-effective reductions in GHG emissions. On March 21, 1994, the United States joined a number of countries around the world in signing the United Nations Framework Convention on Climate Change (UNFCCC). Under the Convention, governments agreed to gather and share information on GHG emissions, national policies and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of GCC. Recently, the United States Supreme Court declared in the court case of Massachusetts et al. vs. the Environmental Protection Agency et al., 549 C.S. 497 (2007) that the EPA does have the ability to regulate GHG emissions.

California Legislation

Senate Bill 97, enacted in 2007, amends CEQA to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. It directs the California Governor's Office of Planning and Research (OPR) to develop draft CEQA guidelines "for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions" by July 1, 2009 and directs the Resources Agency to certify and adopt the CEQA guidelines by January 1, 2010.

In September 2006, Governor Schwarzenegger signed California AB 32, the global warming bill, into law. AB 32 directs the ARB to do the following:

- Make publicly available a list of discrete early action GHG emission reduction measures that can be implemented prior to the adoption of the statewide GHG limit and the measures required to achieve compliance with the statewide limit.
- Make publicly available a GHG inventory for the year 1990 and determine target levels for 2020.
- On or before January 1, 2010, adopt regulations to implement the early action GHG emission reduction measures.
- On or before January 1, 2011, adopt quantifiable, verifiable, and enforceable emission reduction measures by regulation that will achieve the statewide GHG emissions limit by 2020, to become operative on January 1, 2012, at the latest. The emission reduction measures may include direct emission reduction measures, alternative compliance mechanisms, and potential monetary and non-monetary incentives that reduce GHG emissions from any sources or categories of sources that ARB finds necessary to achieve the statewide GHG emissions limit.

- Monitor compliance with and enforce any emission reduction measure adopted pursuant to AB 32.

AB 32 required that by January 1, 2008, ARB determine what the statewide GHG emissions level was in 1990, and approve a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. While the level of 1990 GHG emissions has not yet been officially approved, the ARB has estimated that the 1990 GHG emissions level was 427 million metric tons (MMTs) net carbon dioxide equivalent units (CO_2e) (ARB 2008). In 2004, the emissions were estimated at 480 MMTs net CO_2e (ARB 2008). The ARB estimates that a reduction of 173 MMTs net CO_2e emissions below business-as-usual would be required by 2020 to meet the 1990 levels (ARB 2008). This amounts to a 15 percent reduction from today's levels, and a 30 percent reduction from projected business-as-usual levels in 2020 (ARB 2008).

Executive Order S-3-05, signed by Governor Schwarzenegger on June 1, 2005, calls for a reduction in GHG emissions to 1990 levels by 2020 and for an 80 percent reduction in GHG emissions by 2050. Executive Order S-3-05 also calls for the California EPA (CalEPA) to prepare biennial science reports on the potential impact of continued GCC on certain sectors of the California economy. The first of these reports, "Our Changing Climate: Assessing Risks to California," and its supporting document "Scenarios of Climate Change in California: An Overview" were published by the California Climate Change Center in 2006.

California Assembly Bill 1493 (Pavley), enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce greenhouse gases emitted by passenger vehicles and light duty trucks. Regulations adopted by ARB will apply to 2009 and later model year vehicles. ARB estimates that the regulation will reduce climate change emissions from light duty passenger vehicle fleet by an estimated 18 percent in 2020 and by 27 percent in 2030 (Association of Environmental Professionals [AEP] 2007). Once implemented, emissions from new light-duty vehicles are expected to be reduced in San Diego County by 21 percent by 2020. The federal Corporate Average Fuel Economy (CAFE) standard determines the fuel efficiency of certain vehicle classes in the United States. In 2007, as part of the Energy and Security Act of 2007, CAFE standards were increased for new light-duty vehicles to 35 miles per gallon by 2020. Executive Order S-01-07 was enacted by the Governor on January 18, 2007. Essentially, the order mandates the following: (1) that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and (2) that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established for California. It is assumed that the effects of the LCFS would be a 10 percent reduction in GHG emissions from fuel use by 2020.

Although not originally intended to reduce greenhouse gas emissions, California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The latest amendments were made in October 2005. Energy efficient buildings require less electricity, natural gas and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for water heating) results in greenhouse gas emissions. Therefore, increased energy efficiency results in decreased greenhouse gas emissions.

Local Regulations and Standards

The County is working to develop a comprehensive strategy that will enhance the sustainability of County business operations and communities, building on the many energy efficient and environmentally sound practices already in place. Additionally, the County is working on the General Plan Update. The Update includes smart growth and land planning principles that will reduce Vehicle Miles Traveled (VMT) and

thus result in a reduction in GHG emissions. If/once approved, the General Plan Update will result in development of an implementation plan for GHG reduction measures which will include the following actions:

- Prepare a climate change action plan with a baseline inventory and emissions reduction targets for greenhouse gas emissions from all sources.
- Develop regulations and procedures to encourage the design and construction of new buildings in accordance with "green building" programs.
- Develop regulations that encourage the use of energy recovery, as well as photovoltaic and wind energy in appropriate areas.

The County has also implemented a number of outreach programs such as the Green Building Program, lawn mower trade-in program, and reduction of solid waste by recycling to reduce air quality impacts as well as GHG emissions.

Existing Conditions

Background Air Quality

The APCD operates a network of ambient air monitoring stations throughout San Diego County. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The nearest ambient monitoring stations to the Project site are the Escondido East Valley Parkway station, and the San Diego downtown station (which is the closest station that measures sulfur dioxide [SO_2]). Because both the Escondido and San Diego downtown monitoring stations are located in areas where there is substantial traffic congestion, it is likely that pollutant concentrations measured at those monitoring stations are higher than concentrations in the Project area, and would thus provide a conservative estimate of background ambient air quality. Ambient concentrations of pollutants over the last three years are presented in Table 3.1.1-3, Ambient Background Concentrations.

Concentrations of Carbon monoxide (CO) at the Escondido monitoring station tend to be among the highest in the SDAB, due to the fact that the monitor is located along East Valley Parkway in a congested area in downtown Escondido. The station sees higher concentrations of CO than have historically been measured elsewhere in San Diego County and the background data are not likely to be representative of background ambient CO concentrations at the Project site, due to the site's location in a less developed area. Since 2000, CO has not been monitored at other stations in northern San Diego County.

The federal eight-hour ozone standard, which was formally adopted in 2001, was lowered to 0.075 parts per million (ppm) in 2008. The standard was exceeded at the Escondido monitoring station six times in 2006, three times in 2007, and 13 times in 2008. The Escondido monitoring station also measured exceedances of the state PM_{10} and particulate matter with particles 2.5 microns or smaller ($PM_{2.5}$) standards during the period from 2006 to 2008; however, the highest values were recorded during the southern California fire event in 2007. The data from the monitoring stations indicate that air quality is in attainment of all other federal standards.

Global Climate Change – General Overview

Global Climate Change (GCC) refers to changes in average climatic conditions on Earth as a whole, including temperature, wind patterns, precipitation and storms. Global temperatures are moderated by naturally occurring atmospheric gases, including water vapor, carbon dioxide (CO_2), methane (CH_4) and

nitrous oxide (N_2O), which are known as GHGs. These gases allow solar radiation (sunlight) into the Earth's atmosphere, but prevent radiative heat from escaping, thus warming the Earth's atmosphere.

Global climate change attributable to anthropogenic (human-related) emissions of GHGs (mainly CO_2, CH_4 and N_2O) is currently one of the most important and widely debated scientific, economic and political issues in the United States. Historical records indicate that global climate changes have occurred in the past due to natural phenomena (such as during previous ice ages). Some data indicate that the current global conditions differ from past climate changes in rate and magnitude.

The United Nations IPCC constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. The Panel concluded that a stabilization of GHGs at 400 to 450 ppm CO_2 equivalent concentration is required to keep global mean warming below 35.6º Fahrenheit (2º Celsius), which is assumed to be necessary to avoid dangerous climate change (AEP 2007).

Greenhouse Gases

GHGs have varying global warming potential (GWP). The GWP is the potential of a gas or aerosol to trap heat in the atmosphere; it is the "cumulative radiative forcing effect of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas" (USEPA 2006). The reference gas for GWP is CO_2; therefore, CO_2 has a GWP of one. The other main greenhouse gases that have been attributed to human activity include CH_4, which has a GWP of 21, and N_2O, which has a GWP of 310. Table 3.1.1-2 presents the GWP and atmospheric lifetimes of common GHGs.

GHG Inventory

The State of California GHG Inventory performed by the ARB, compiled statewide anthropogenic GHG emissions and sinks. The current inventory covers the years 1990 to 2004. The major source of GHG in California is transportation, contributing 38 percent of the state's total GHG emissions. Electricity generation is the second largest source, contributing 25 percent of the state's GHG emissions (AEP 2007).

In addition to the State of California GHG Inventory, a more specific regional GHG inventory was prepared by the University of San Diego School of Law Energy Policy Initiative Center (University of San Diego 2008). This San Diego County Greenhouse Gas Inventory (SDCGHGI) is a detailed inventory that takes into account the unique characteristics of the region in calculating emissions. The SDCGHGI calculated GHG emissions for 1990, 2006 and projected 2020 emissions. Based on this inventory and the emission projections for the region, the study found that emissions of GHGs must be reduced by 33 percent below business as usual in order for San Diego County to achieve 1990 emission levels by the year 2020. "Business as usual," or forecasted emissions, is defined as the emissions that would occur in the absence of Assembly Bill (AB) 32's mandated reductions. Construction of buildings using Title 24 building standards or the County's 2006 building code would create "business as usual" emissions. Total GHGs in San Diego County are estimated at 34 MMTs of CO_2e.

Existing On-site Conditions

The site is currently undeveloped and includes disturbed areas and native vegetation. Natural vegetation and soils temporarily store carbon as part of the terrestrial carbon cycle. Carbon is assimilated into plants and animals as they grow and then dispersed back into the environment when they die. There are two existing sources of carbon storage at the Project site – natural vegetation and soils. It is difficult to assess net changes in carbon storage associated with the Project. The key issue is the balance between the loss of natural vegetation and future carbon storage associated with landscaping. The situation is further complicated by changes in fire regime. Carbon in natural vegetation is likely to be released into the

atmosphere through wildfire every 20 to 150 years. Carbon in landscaped areas would be protected from wildfire. The balance between these factors would influence the long-term carbon budget on the site.

The majority of carbon within the site is stored in the soil. Soil carbon accumulates from inputs of plant and animal matter, roots and other living components of the soil ecosystem (e.g., bacteria, worms, etc.). Soil carbon is lost through biological respiration, erosion and other forms of disturbance. Overall, soil carbon moves more slowly through the carbon cycle, and it offers greater potential for long-term carbon storage. Field observations suggest that urban soils can sequester relatively large amounts of carbon. Observations from across the United States suggest that warmer and drier climates (such as southern California) may have slightly higher soil organic matter levels when compared to equivalent areas before development.

3.1.1.2 *Analysis of Project Effects and Determination as to Significance*

Implementation of the RAQS or SIP

Guidelines for the Determination of Significance

A project would have a significant impact on regional and local air quality if it would:

1. Conflict or obstruct the implementation of the San Diego RAQS or applicable portions of the SIP.

Guideline No. 1 is based on the County's Guidelines for Determining Significance – Air Quality (March 19, 2007).

Analysis

The RAQS outlines APCD's plans and control measures designed to attain the state air quality standards for ozone. In addition, the APCD relies on the SIP, which includes the APCD's plans and control measures for attaining the ozone NAAQS. These plans accommodate emissions from all sources, including natural sources, through implementation of control measures, where feasible, on stationary sources to attain the standards. Mobile sources are regulated by the USEPA and the ARB, and the emissions and reduction strategies related to mobile sources are considered in the RAQS and SIP.

The RAQS relies on information from ARB and SANDAG, including projected growth in the County, mobile, area and all other source emissions, in order to project future emissions and determine from that the strategies necessary for the reduction of stationary source emissions through regulatory controls. The ARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County. As such, projects that propose development consistent with the growth anticipated by the general plans would be consistent with the RAQS. In the event that a project would propose development that is less dense than that anticipated in the General Plan, the project would likewise be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the General Plan and SANDAG's growth projections, the project would be in conflict with the RAQS and SIP, and might have a potentially significant impact on air quality. This would warrant further analysis to determine if the Proposed Project and the surrounding projects exceed the growth projections used in the RAQS for the specific subregional area.

The Project is proposing to add 45 single-family residential units in the unincorporated area of the County. The Project is located in the North County East Major Statistical Area, in the San Marcos Subregional Area. The total cumulative housing projected for the San Marcos Subregional Area for 2030,

according to SANDAG projections, is an additional 28,401 dwelling units. The Project's projected growth of 45 dwelling units is consistent with the number of units allowed on the site in the General Plan, and is only 0.15 percent of the total growth projected for the Subregional Area. Thus the growth projected for the Project would be consistent with the RAQS and SIP. The Proposed Project would conform to the RAQS and SIP and **no impact** would occur.

Conformance to Federal and State Ambient Air Quality Standards

Guidelines for the Determination of Significance

A project would have a significant impact on regional and local air quality if it would:

2. Result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Guideline No. 2 is based on the County's Guidelines for Determining Significance – Air Quality (March 19, 2007).

Analysis

Impacts associated with the violation of air quality standards include both construction (short-term) impacts and operational (long-term). Construction effects include construction equipment emissions and fugitive dust during grading. Operational effects include emissions associated with the Project at full buildout, including traffic.

Construction Impacts

Emissions of pollutants such as fugitive dust that are generated during construction are generally highest near the construction site. Construction emissions of the Project were estimated through the use of emission factors from the South Coast Air Quality Management District's CEQA Air Quality Handbook (South Coast Air Quality Management District [SCAQMD] 1993) and the ARB OFFROAD Model emission factors for construction equipment. It was assumed that heavy construction equipment would be operating at the site for eight hours per day, six days per week during Project construction.

It was conservatively estimated for the purposes of air quality modeling that the grading and construction phase of the Project would last approximately 18 months. The grading portion of the Project would involve 322,000 cubic yards of cut and the same amount of fill (including that required for the emergency access road), which requires no import or disposal of materials. It was assumed that approximately five acres or less would be graded on any single day. The types of utilities and infrastructure improvements required for the development include the following:

1. Wet utilities construction (sewer, water, storm drains)
2. Dry utilities construction
3. Curb and gutter construction
4. Asphalt and paving
5. House construction

Fugitive dust emissions were estimated using the emission factor for PM_{10} emissions from construction recommended in the SCAQMD CEQA Air Quality Handbook, Table A9-9, of 26.4 pounds per acre per

day (lbs/acre/day). Assuming a maximum of five acres would be graded in a single day, the daily PM_{10} emissions would be as much as 132 lbs/day.

Construction heavy equipment requirements were estimated based on similar projects and an estimate of the requirements for the construction of the Project. Table 3.1.1-4 presents a worst-case estimate of the number and type of equipment required at any one time for Project construction. Grading/site preparation and site utilities/infrastructure construction would occur simultaneously toward the end of the site preparation phase; this overlap of construction phases is anticipated to last no more than one month. The equipment requirements for the overlap of site preparation and site utilities/infrastructure are shown as a separate phase in Table 3.1.1-4. House construction would not occur simultaneously with other construction and would be implemented in phases.

The maximum number of construction workers for each phase was estimated based on the methodology presented in the SCAQMD CEQA Air Quality Handbook, Table A9-17 and associated tables. Refer to Attachment A of Appendix H of this EIR for detailed assumptions and calculations. The worst-case emissions were based on the maximum number of workers calculated for any phase of the construction of the Project. It was also assumed that a maximum of 25 daily construction truck trips would occur during the grading and site preparation phase, and 15 daily construction truck trips during the overlap of site preparation and site utilities, and for the site utilities/infrastructure construction phase.

Emissions from asphalt offgassing were estimated by assuming an emission rate of 2.62 lbs/acre of area to be paved. Based on the length of the road that would be paved within the Project boundaries (approximately 6,900 feet total), assuming the road width would be approximately 30 feet (15 feet per lane for two lane road), a total of 4.75 acres would requiring paving, for a total of 12.5 pounds of Reactive Organic Compounds (ROC) emissions. In addition, a portion of the Cleveland Trail would be paved; the portion would be approximately 0.47 acre, resulting in a total of 1.23 pounds of ROC emissions. Assuming asphalt paving occurs over a one-week (six-day) period, ROC emissions would be approximately 2.29 lbs/day. For the purpose of estimating emissions from the house construction phase, it was conservatively assumed that a maximum of 18 houses would be constructed on any one day. Furthermore, it was assumed that water-based coatings would be used for both exterior and interior surfaces.

Best management practices to reduce the amount of fugitive dust generated from construction of the Proposed Project, and their respective control efficiencies (based on control efficiencies provided in the SCAQMD CEQA Air Quality Handbook, Table 11-4), include the following:

- Multiple applications of water during grading between dozer/scraper passes – 34-68 percent
- Paving, chip sealing or chemical stabilization of internal roadways after completion of grading – 92.5 percent
- Use of sweepers or water trucks to remove "track-out" at any point of public street access – 25-60 percent
- Termination of grading if winds exceed 25 mph – not quantified
- Stabilization of dirt storage piles by chemical binders, tarps, fencing or other erosion control – 30-65 percent
- Hydroseeding of graded residential lots – 30-65 percent

Although it was assumed that all of the above dust control measures would be implemented, to model the most conservative construction estimates, only application of water during grading was taken into consideration when applying a control efficiency on particulate emissions. For purposes of conservative modeling, it was assumed that an average control efficiency of 51 percent would be realized through

application of water at least twice daily. Other control measures were not accounted for in the emission calculations. Emission estimates for construction with implementation of the above-listed dust control measure are shown in Table 3.1.1-5. Detailed emission calculations are shown in Attachment A of Appendix H of this EIR.

Even without taking into consideration the other control measures discussed above, but only considering watering between grading passes with a control efficiency of 51 percent, the estimated PM_{10} emissions during the grading phase of the Project construction would be below the San Diego County significance criteria. As shown on Table 3.1.1-5, Project construction emissions also would be below the County significance criteria for the other pollutants of concern.

Project construction would not result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase of PM_{10} or exceed quantitative thresholds for O_3 precursors, oxides of nitrogen (NO_X) and ROCs; thus, **a less than significant impact** would occur.

Operational Impacts

The main operational impacts associated with the Project would be confined to impacts associated with traffic. Minor impacts would be associated with residential energy use and fireplaces. Operational impacts associated with energy use were estimated based on the SCAQMD's emission factors for residential use. To estimate emissions associated with the use of fireplaces in the residences, it was assumed that each residence would have three fireplaces, two of which would be wood burning, and one of which would be gas, and would have negligible emissions. The fireplaces would not be used for heating purposes, but rather for aesthetics. Based on the USEPA's AP-42 emission factors (USEPA 1996), the emissions associated with fireplace wood burning were estimated.

To address whether the Project's operational emissions would violate any air quality standard or contribute substantially to an existing or proposed air quality violation, the emissions associated with Project-generated traffic were compared with the County's significance criteria. According to the TIA (Appendix F), Project trips would total 540 ADT.

To estimate emissions associated with Project-generated traffic, the EMFAC2007 model (ARB 2007) was used. The EMFAC2007 model is the Caltrans emission factor model for on-road traffic. Because the Project is a residential development, Project-related traffic was assumed to be comprised of light duty autos and light duty trucks (i.e., small trucks, sport utility vehicles, and vans). For estimating emission factors associated with light duty autos and light duty trucks, it was assumed that these vehicles would be a mix of non-catalytic, catalytic and diesel vehicles as indicated in the EMFAC2007 outputs. For purposes of conservative modeling, emission factors representing the vehicle mix for 2010 were used to estimate emissions. Based on the results of the EMFAC2007 model for subsequent years, emissions would decrease on an annual basis from 2010 onward due to phase-out of higher polluting vehicles and implementation of more stringent emission standards. Vehicle speed was assumed to be 27 miles per hour, based on a speed limit of 30 miles per hour in the residential development, and utilizing the recommended average cruise speed in Appendix B of the Caltrans Institute of Transportation Studies (ITS) Transportation Project-Level Carbon Monoxide Protocol (Protocol), Table B.10, Average Cruise Speed as a Function of Arterial Classification and Free-Flow Speed, for a minor arterial, suburban. The average vehicle mileage traveled within the Proposed Project was assumed to be 0.4 mile based on the Project site map. Table 3.1.1-6 presents the results of the emission calculations, in lbs/day and tons/year, along with a comparison with the County significance criteria.

The emission calculations for total operational emissions are shown in Table 3.1.1-7. Total operational emissions would be below the significance thresholds for all pollutants. **A less than significant impact** would occur.

Carbon Monoxide "Hot Spots"

Projects involving traffic impacts may result in the formation of locally high concentrations of CO, known as CO "hot spots." To verify that the Project would not cause or contribute to a violation of the CO standard, a screening evaluation of the potential for CO hot spots was conducted based on the TIA. That report evaluated whether or not there would be a decrease in the level of service at the roadways and/or intersections affected by the Project. In accordance with the County requirements for air quality analyses, the Protocol (Caltrans 1998) was followed to determine whether a CO hot spot is likely to form due to Project-generated traffic. In accordance with the Protocol, CO hot spots are typically evaluated when (a) the LOS of an intersection or roadway decreases to a LOS E or worse; (b) signalization and/or channelization is added to an intersection; and (c) sensitive receptors such as residences, commercial developments, schools, hospitals, etc. are located in the vicinity of the affected intersection or roadway segment.

Based on the Traffic Impact Analysis, the following intersections would degrade to LOS E or worse with the addition of Project-related traffic to existing traffic levels:

- Buena Creek Road/Monte Vista Drive (LOS E, PM peak hour)

The intersection for which the Project would cause a direct significant impact was evaluated. As recommended in the Protocol, California Line Source Dispersion Model (Version 4) [CALINE4] modeling for this intersection was conducted for the Project plus cumulative traffic scenario to calculate maximum predicted one- and eight-hour CO concentrations. As recommended in the Protocol, receptors were located at locations that were approximately 3 meters from the mixing zone, and at a height of 1.8 meters. Average approach and departure speeds were assumed to be one mph, which results in higher CO emission rates and a conservative estimate of potential impacts. Also, for conservative modeling purposes, emission factors from the EMFAC2007 model for the year 2011 were used in the CALINE4 model (emission factors for future years would be lower than for 2011).

The existing maximum one- and eight-hour background concentrations of CO that was measured at the Escondido monitoring station for the period 2006 – 2008 of 5.7 and 3.61 parts per million (ppm), respectively, were used to represent future maximum background one-hour and eight-hour CO concentrations. CO concentrations in the future may be lower as inspection and maintenance programs and more stringent emission controls are placed on vehicles.

The CALINE4 model outputs are provided in Attachment A of Appendix H of this EIR. Table 3.1.1-8 presents a summary of the predicted CO concentrations (impact plus background) for the Existing plus Cumulative plus Project traffic at the Buena Creek Road and Monte Vista Drive intersection. As shown in Table 3.1.1-8, the predicted CO concentrations would be substantially below the one-hour and eight-hour NAAQS and CAAQS for CO shown in Table 3.1.1-1. Therefore, no exceedances of the CO standard are predicted, and the Project would not cause or contribute to a violation of the air quality standard as a result of CO hot spots. **A less than significant** impact would occur.

Impacts to Sensitive Receptors

Guidelines for the Determination of Significance

A project would have a significant impact on regional and local air quality if it would:

3. Expose sensitive receptors to substantial pollutant concentrations, including:

   a. Place sensitive receptors near CO "hotspots" or create CO "hotspots" near sensitive receptors; and/or

   b. Expose sensitive receptors to an individual excess cancer risk that exceeds one in one million unless the project implements Toxics Best Available Control Technology (T-BACT), in which case the significance threshold is 10 in one million, or a health hazard index of one or more.

Guideline No. 3 is based on the County's Guidelines for Determining Significance – Air Quality (March 19, 2007).

Analysis

Air quality regulators typically define "sensitive receptors" as schools, hospitals, resident care facilities, day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. For the purpose of CEQA analysis, the County definition also includes residences (County of San Diego 2007). The two primary emissions of concern for impacts to sensitive receptors are CO and diesel particulate matter. As discussed above, operational impacts would not result in CO hot spots because all intersections would be mitigated to LOS D or better. This analysis therefore focuses on diesel particulate matter.

Diesel exhaust particulate matter is known to the state of California as a carcinogenic substance. The risks associated with exposure to substances with carcinogenic effects are typically evaluated based on a lifetime of chronic exposure, which is defined in the California Office of Environmental Health Hazard Assessment (OEHHA) guidelines, *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2003) as 24 hours per day, 7 days per week, 365 days per year, for 70 years. Because diesel exhaust particulate matter is considered to be carcinogenic, long-term exposure to diesel exhaust emissions has the potential to result in adverse health impacts.

A screening evaluation was conducted on the particulate emissions. Specific assumptions used for the screening evaluation are located in Appendix H of this EIR. Diesel exhaust particulate matter would be emitted during operation of heavy equipment during Project construction. Site grading was assumed to last for four months (assuming all work over the four-to-six month grading effort would result in conservative modeling for this issue), site utility work was anticipated to take six months (overlapping with grading), and house construction was expected to take eight months. Health risks calculated for each phase of construction were considered to be additive. It was assumed that the equipment would operate for eight hours per day, six days per week. The nearest existing receptors were located based on the site map and aerial photographs for the Project area.

Eight existing receptors were identified, and a receptor grid was placed in the residential area to the west. Seven of the eight receptors are located at residences located north of the Project site, and one receptor to the east, near the existing water tower. The risk evaluation was conducted to assess the potential for an unacceptable risk at these existing receptors due to exposure to diesel particulate emissions from heavy construction equipment during construction.

The maximum excess cancer risk predicted would be 0.337 in a million, which is below the County's significant risk level of 1 in a million. Risks associated with exposure to diesel particulate during construction would, therefore, be **less than significant.**

Vehicular traffic may result in minor amounts of toxic air contaminants (TACs). Based on EMFAC outputs (provided in Attachment A to Appendix H) and considering only light duty autos and light duty trucks, the total percent of trips for diesel light duty autos and trucks is approximately 0.4 percent for each. Therefore, there are approximately 2 trips per day out of 540 that would be attributable to diesel light duty autos (0.4 percent of 421 light-duty auto trips), and approximately 1 trip per day attributable to diesel light duty trucks (0.4 percent of 119 light-duty truck trips) out of 540 that would be attributable to diesel light duty trucks. Traffic would travel along Sugarbush Drive to access the Project, for a distance of 0.2 mile, where existing receptors could be affected by emissions from diesel vehicles. Total daily emissions of diesel particulate were calculated to be 0.00019 lbs/day. Emission calculations are included in Attachment A to Appendix H of this EIR.

Potential impacts to sensitive receptors were evaluated based on the SCAQMD's "Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions" (SCAQMD 2002). According to the Guidance, annual average concentrations were calculated at each receptor. The highest annual average concentration was predicted at a receptor located near Sugarbush Drive. The highest annual average diesel particulate concentration was predicted to be 0.00019 $\mu g/m^3$. Multiplying by the unit risk factor of 3×10^{-4} $(\mu g/m^3)^{-1}$ to calculate excess cancer risk, assuming 70 years of exposure for 365 days per year, 24 hours per day, the maximum excess cancer risk along the roadway would be 0.057 in a million, which is below the San Diego County's significance threshold of 1 in a million. Impacts that are farther from the roadway would be lower, as concentrations decrease with increasing distance from the roads. The potential impacts associated with exposure to diesel emissions from light duty autos and light duty trucks accessing the residences at the Project would be **less than significant**.

Odor Impacts

Guidelines for the Determination of Significance

A project would have a significant impact on regional and local air quality if it would:

4. Generate objectionable odors or place sensitive receptors next to existing objectionable odors, affecting a substantial number of people.

Guideline No. 4 is based on the County's Guidelines for Determining Significance – Air Quality (March 19, 2007).

Analysis

Project construction could result in minor amounts of odor compounds associated with diesel heavy equipment exhaust. Because the construction equipment would be operating at various locations throughout the construction site, and because any operation that would occur in the vicinity of existing receptors would be temporary, impacts associated with odors during construction are not considered significant.

The residential development itself would not be a source of odor impacts. According to the SCAQMD CEQA Air Quality Handbook, land uses associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting activities, refineries,

landfills, dairies, and fiberglass molding operations. These land uses are not proposed as part of the Project.

The Project could produce objectionable odors, based on emissions from motor vehicles that may contain volatile organic compounds, ammonia, carbon dioxide, hydrogen sulfide, methane, alcohols, aldehydes, amines, carbonyls, esters, disulfides dust and endotoxins during both construction and operational phases. These substances, however, if present at all, would only be in trace amounts (less than 1 $\mu g/m^3$). Consequently, air quality odor impacts would be **less than significant**.

Global Climate Change

Guidelines for the Determination of Significance

The County has not yet adopted a guideline for determining significance for climate change. This EIR uses the 900 metric ton screening threshold based on available guidance from the California Air Pollution Control Officer's Association [CAPCOA]'s *CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act* (CAPCOA 2008). That White Paper references a 900 metric ton guideline as a conservative threshold for requiring further analysis and mitigation[1].

Analysis

GHG emissions associated with the Proposed Project were estimated separately for three categories of emissions: (1) energy use, including electricity and natural gas usage, (2) water consumption, and (3) transportation. Emissions were estimated based on emission factors from the California Climate Action Registry (CCAR) General Reporting Protocol (CCAR 2008). The complete emissions inventory is summarized below and included in the Global Climate Change Evaluation (Appendix H of this EIR).

Energy Use Emissions

The Project proposes to develop 45 residential dwelling units. The associated energy use is estimated at approximately 532 megawatt hours (MWh) per year, which would generate approximately 212 metric tons CO_2e.

Natural gas use was estimated based on average gas consumption per square foot as reported by SCAQMD (SCAQMD 1993). Natural gas consumption was multiplied by the CCAP emission factors for CO_2 equivalents per therm. Natural gas usage is projected at approximately 4,419 million British thermal units (BTUs), which would generate approximately 106 metric tons CO_2e.

Water Consumption

Water and energy use are often closely linked. The provision of potable water to users consumes large amounts of energy associated with five stages: source and conveyance, treatment, distribution, end use, and wastewater treatment. Water demand estimates were based on information on water requirements for the Project and are estimated at approximately 8 million gallons per year. The embodied energy demand

[1] This threshold was one of many suggested by CAPCOA, which was intended to exclude small development projects that will contribute a relatively small fraction of the cumulative statewide GHG emissions. CAPCOA estimated that this threshold would exclude approximately 10 percent of new development projects but capture the remaining 90 percent of new residential development, thereby establishing a strong basis for demonstrating that cumulative reductions are being achieved across the state.

associated with this water use was converted to GHG emissions with the same electrical grid coefficients as the other purchased electricity. It is projected to generate approximately 41 metric tons CO_2e.

Transportation

On-road vehicle emissions account for 46 percent of existing GHG emissions in San Diego County. Several regulatory initiatives have been passed to reduce emissions from on-road vehicles. These initiatives include improvements in the CAFE standard included in Title 49 of the Energy Independence and Security Act of 2007, AB 1493, and the LCFS. The federal CAFE standard determines the fuel efficiency of certain vehicle classes in the United States, and has remained largely unchanged since 1990; however, federal initiatives have increased CAFE standards for new light-duty vehicles to 35 miles per gallon by 2020. The new CAFE standards will take effect no sooner than 2011, which was the start date used in the SDCGHGI. It is anticipated that CAFE standard improvements would reduce GHG emissions by 5 percent by the year 2016, and by 12 percent by the year 2020. CAFE standard reductions were not incorporated into this conservative analysis.

AB 1493 (also known as the Pavley Bill) is a standard for new light-duty passenger vehicles. AB 1493 has not been implemented due to legal challenges, but requires automobile manufacturers to reduce vehicle emissions of GHGs in light-duty vehicles, which are defined as light-duty passenger cars, light-duty trucks, and medium-duty trucks/vehicles. If implemented, ARB estimates that the regulation will reduce climate change emissions from light-duty passenger vehicle fleet by 18 percent in 2020 and by 27 percent in 2030 (AEP 2007). Once implemented, zero emissions from new light-duty vehicles are expected to be reduced in San Diego County by 21 percent. For the purpose of this analysis, it was assumed that an 18 percent reduction in GHG emissions would occur.

The LCFS was included in Executive Order S-01-07, and addresses the type of fuel used in vehicles. The LCFS seeks to reduce the carbon content of the fuel, therefore reducing GHG emissions even if the total fuel consumption is not reduced. The LCFS has been approved by ARB as a discrete early action item under AB 32 and implementing regulations are currently under development. The SDCGHGI assumed a 10 percent reduction in GHG emissions in San Diego County by the year 2020 due to the LCFS, which has been incorporated into this analysis. Resulting vehicle emissions are anticipated to generate approximately 476 metric tons CO_2e.

The results of the inventory for operational emissions for the Project are presented in Table 3.1.1-9. These include GHG emissions associated with buildings (natural gas, purchased electricity) and water consumption (energy embodied in potable water). Emissions of GHGs would result in a net increase in emissions of approximately 849 metric tons CO_2e, which is below the 900 metric ton threshold identified by CAPCOA (CAPCOA 2008). Because the emissions from the Project are below the draft significance level and would not conflict with implementation of AB 32, no further analysis is required and the project would result in a **less than significant impact** on global climate.

3.1.1.3 *Cumulative Impact Analysis*

Guidelines for the Determination of Significance

The proposed project would have a significant impact on regional and local air quality if it would:

5. Result in a cumulatively considerable net increase of PM_{10} or $PM_{2.5}$, or exceed quantitative thresholds for O_3 precursors, NO_X and Volatile Organic Compounds (VOCs).

Guideline No. 5 is based on the County's Guidelines for Determining Significance – Air Quality (March 19, 2007).

Analysis

The cumulative study area for air pollutant emissions, except for PM_{10}, includes the SDAB, because emissions from the Proposed Project along with other pending cumulative projects all mix within this basin. The cumulative study area for PM_{10} consists of the area located immediately around the Project site, because such particles are larger and result in near-field impacts.

Using SCAQMD's Localized Significance Threshold Methodology (SCAQMD 2003) to evaluate localized PM_{10} impacts, it was determined that fugitive PM_{10} concentrations would decrease with distance from the fenceline. By 100 meters (approximately 330 feet) from the Project boundary, the concentration of PM_{10} would decrease by 99 percent. The only identified cumulative projects in the immediate vicinity of the Proposed Project are Fredas Hill, the Kowano Subdivision and Tai Estates, as shown on Figure 1-8. The Fredas Hill project (13 residential units) has been approved and the Kowano Subdivision (eight residential units) was circulated for public review beginning May 14, 2009. Because these projects are further along in the approval process than the Proposed Project, it is likely that they would be constructed prior to construction of the Proposed Project. The Tai Estates project (six residential units) currently is addressing issues related to secondary emergency access and the need to obtain a HLP. Approvals and construction are therefore expected to occur at a later date than the Proposed Project. Furthermore, The Leese Property subdivision (three residential units) along Cleveland Trail also has been approvedThe proposed development associated with each of these properties would be located more than 100 meters from the construction activities proposed on the Sugarbush Project site. Given the short-term nature of the relatively minor Project-related improvements along Cleveland Trail, it is unlikely that they would occur simultaneously with construction of three single-family residences on the Leese Property. Should such an overlap occur, the potential incremental dust generation increase would be minimal. Furthermore, all projects would be required to comply with the County's grading ordinance, which requires implementation of dust control measures to reduce fugitive dust generated during grading. These considerations combine to result in a **less than significant** cumulative air quality impact for PM_{10} issues.

Modeling for individual projects cannot be conducted to evaluate a project's contribution to ozone concentrations due to the complexity of the modeling required and the necessity of modeling the entire air basin to evaluate ozone impacts. Basin-wide modeling is conducted by the APCD as part of its SIP attainment demonstration. The attainment demonstration is a modeling analysis that demonstrates that the SDAB will attain and maintain the ozone standards. The modeling includes construction emissions as part of the analysis. Therefore, with regard to cumulative impacts associated with ozone precursors, provided a project is consistent with the community and general plans, it has been accounted for in the ozone attainment demonstration contained within the SIP. As a result, a less than significant cumulatively considerable impact on the ambient air quality for ozone would occur. The Project is proposing development consistent with the levels accounted for in the current General Plan and therefore in the SIP. Furthermore, emissions of non-attainment pollutants comprise only a small percentage of the overall County-wide emissions budget and are less than the significance thresholds. The proposed addition of 45 single-family residences comprises a small percentage of the overall growth projected for the San Marcos Subregional Area. Emissions would therefore not be cumulatively considerable and would be **less than significant**.

The planned or reasonably foreseeable projects were accounted for in the TIA, and were therefore considered in the evaluation of CO hot spots. Based on the CO hot spots evaluation, **no cumulative impact** associated with traffic is anticipated.

No significant impacts associated with odors would occur during the construction or operation of the Project. The cumulative list of projects was evaluated and none of these projects would create objectionable odors. Any cumulative odor impacts are therefore anticipated to be **less than significant**.

Emissions of GHGs would result in a net increase in emissions that is below the 900 metric ton threshold identified by CAPCOA. As previously noted, this threshold was intended to exclude small development projects that would contribute a relatively small fraction of the cumulative statewide GHG emissions. Specifically, it was estimated that approximately 10 percent of new development projects would be below the threshold, while the remaining 90 percent would be above the threshold. Because the emissions from Project are below the threshold, the Project would not result in a cumulatively considerable contribution to global climate change. Impacts would be **less than significant.**

Based on the analysis provided above, the Proposed Project's cumulative contribution to air quality impacts would be **less than significant.**

3.1.1.4 *Significance of Impacts Prior to Mitigation*

Impacts to air quality would be less than significant prior to mitigation and with the implementation of the identified design measures and conformance with applicable regulatory requirements.

3.1.1.5 *Mitigation*

Because no significant impacts were identified, mitigation is not required.

3.1.1.6 *Conclusion*

Proposed Project would conform to the RAQS and SIP. Operational emissions would be associated with traffic accessing the Proposed Project site as well as area sources such as fireplaces, energy use and landscaping. Construction emissions would include emissions associated with fugitive dust, heavy construction equipment, and construction workers commuting to and from the Project site.

Measures incorporated into the Project design to reduce impacts associated with construction include the following:

- Multiple applications of water during grading between dozer/scraper passes
- Paving, chip sealing, or chemical stabilization of internal roadways after completion of grading
- Use of sweepers or water trucks to remove "track-out" at any point of public street access
- Termination of grading if winds exceed 25 mph
- Stabilization of dirt storage piles by chemical binders, tarps, fencing, or other erosion control
- Hydroseeding of graded residential slopes, unless lots are developed immediately after grading

Based on the evaluation of air emissions, the Project operational and construction emissions would be less than significant. Project-related traffic would not result in CO "hot spots." The Project would not expose sensitive receptors to substantial pollutant concentrations. Long-term and construction-period odor impacts associated with the Proposed Project would not be significant.

The Proposed Project would generate GHG emissions associated with natural gas, purchased electricity, energy embodied in water, and transportation. GHG emissions were identified as less than significant on a project-specific and cumulative level. Additionally, the Project would contribute the goals of AB 32 by

incorporating design features that would result in a reduction in emissions compared to doing "business as usual," such as incorporating features to minimize water and electricity use.

3.1.2 Hazards (Wildfires)

A Conceptual FPP was prepared by Hunt Research Corporation (Hunt 2009) for the Proposed Project in order to comply with Section 4703 of the County Fire Code. The FPP is included as Appendix B of this EIR.

3.1.2.1 *Existing Conditions*

The Project site currently is undeveloped, and is mainly comprised of Diegan coastal sage scrub and non-native grassland. Surrounding land uses include a mosaic of estate residential, rural residential and agricultural land uses to the north and west, and undeveloped property to the east and south. The Project site was determined to be a high Urban Wildland Interface fire hazard area that is susceptible to a fire burning from the north and east.

The Project site is located within the jurisdiction of the VFPD. The closest fire station (Vista Station 2) is approximately two miles (driving distance) west of the Project site, located at 1050 Valley Drive in Vista.

3.1.2.2 *Analysis of Project Effects and Determination as to Significance*

Guidelines for the Determination of Significance

A project would result in a significant impact related to wildland fire and fire protection if it would not:

1. Demonstrate compliance with the following fire regulations: California Fire Code, California Code of Regulations, County Fire Code, and the County Consolidated Fire Code.[2]
2. Be consistent with the recommendations, including fuel modification, of the comprehensive FPP prepared for the Project.
3. Meet the emergency response objectives identified in the Public Facilities Element of the County General Plan or offer sufficient mitigation measures~~"Same Practical Effect."~~[23]

Guidelines No. 1 through 3 are based on the County's Guidelines for Determining Significance and Report Format and Content Requirements – Wildland Fire and Fire Protection (December 19, 2008) and the regulations cited therein.

Analysis

A fire risk assessment was performed for the Project by Hunt. As stated above, the Project site was determined to be a high Urban Wildland Interface fire hazard area that is susceptible to a fire burning from the north and east. Based upon the fire risk assessment, the originally proposed Project was redesigned and relocated to a less hazardous location on the Project site.

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[2] ~~"Same Practical Effect" as defined under *California Code of Regulations, Title 14, Section 1271.00 (Definitions)*, and as used in these guidelines, means an exception or alternative with the capability of applying accepted wildland fire suppression strategies and tactics, and provisions for fire fighter safety, including access for emergency wildland fire equipment.~~Note that the California State Board of Forestry and Fire Protection has certified the County Consolidated Fire Code and County Building Code together as meeting or exceeding CCR Title 14 " SRA Fire Safe Regulations" and authorizing these codes.

[3] If the appropriate emergency travel time cannot be met for a proposed project, the discretionary project will be denied unless sufficient mitigation measures are included as a basis of approval based on the recommendations of the Director and the responsible agency providing fire protection. [Policy 1.2, Implementation Measure 1.2.2]

To further protect the proposed residential structures from possible wildfires, and at the request of the VFPD, the Proposed Project has incorporated fuel modification zones. Such zones would range from 100 to 125 feet in width along the southern and eastern residential lots (Lots 8 through 11 and 33 through 45). A six-foot-high, free-standing fire wall would extend along the northern boundaries of Lots 1 and 6 adjacent to the building pads, the southern edges of Lots 8 through 11, and the eastern boundaries of Lots 11 and 33 through 45.[4] Lots 1 through 8[5], on the west side of the property, would abut existing development; therefore, a 75-foot fuel modification zone (Zone 1, as discussed below) would be required to the west of the proposed houses.

The proposed interior houses (Lots 12 through 32) would all be designed to comply with the requirements of Zone 1, as discussed below. The proposed detention and bioretention basins (Lots E and F) would have a 30-foot fuel modification zone around the perimeter in addition to the six-foot-high fire walls on Lots 1 and 6 as stated above.

Fuel modification zones along either side of proposed Sugarbush Drive would be 30 feet wide. Interior roads would have a fuel modification zone of 20 feet on either side. The north side of the on-site portion of the proposed emergency access road through Lot F would be bordered with an eight-foot-high fire wall.

~~The VFPD and off-site private property owners would be responsible for ongoing fuel modification/weed abatement requirements on the existing off-site properties, per existing regulations, as the Project Applicant and future Project residents would have no authority to do so.~~

Fuel modification zones for the Proposed Project would consist of two zones (1 and 2). Zone 1 generally is located within 30 feet of all sides of structures, and is an irrigated "wet" zone. Grasses are required to be less than three inches in height. Mature tree canopies must be spaced 50 feet from one another and cannot be within 10 feet of a structure. Fire resistive shrubs up to 18 inches tall can be located beyond 15 feet from a structure, and can be spaced 10 feet away from each other. Zone 2 is located from 30 feet to up to 125 feet from structures, and also is considered an irrigated "wet" zone. Zone 2 contains low volume, fire resistive, low profile fuel (native grasses less than three inches tall). It also can include certain properly mowed, thinned, limbed, pruned and spaced natural existing vegetation (except for plants listed on Table 3.1.2-1), which are prohibited within fuel modification zones.

The VFPD sent a letter dated August 11, 2008 regarding the Proposed Project (refer to Appendix B). This letter stated conditions of approval of the Project by the Fire District, which included fire access roadway standards (including secondary access), fire hydrant standards, identification of addresses, and provision of sprinklers in all residential and attached structures. The Proposed Project has been designed to comply with the requirements of this letter. Proposed roadway widths, grades, and access would meet the standards required by the VFPD Fire Code and the County Consolidated Fire Code. The Proposed Project also would provide a secondary emergency access road via Cleveland Trail. This secondary access was approved by the Fire District in a letter dated April 21, 2009.

The FPP also offers a number of recommendations regarding water supply and fire resistant construction for all structures that have been incorporated as Project design measures. These design measures

[4] If rooflines would be above the top of the wall, the fuel modification zone would be 125 feet. Where rooflines of proposed houses on these lots are below the top of the wall, a 100-foot fuel modification zone would be required.

[5] Lot 8 is in the southwestern corner of the Project site; therefore, the southern boundary would have a fuel modification zone of 100 or 125 feet wide, and the western boundary would have a fuel modification zone of 75 feet wide.

contribute directly to minimization of loss, injury or death related to wildfire and contribute to compliance with applicable fire regulations. Specific criteria address fire hydrants; road width, circulation and grade; access gates; driveways; road/structure identification; and ignition resistant construction. Please refer to Appendix B for further details regarding these recommendations. In addition, the Project's HOA would support and participate in a local Certified Evacuation Program (or equivalent), as endorsed by the VFPD. Prescribed controlled burns also may occur within on-site open space as a precaution to potential wildfire hazards.

The ~~response time~~distance to the most remote lot on the Project site from Vista Fire Station 2 is 1.9 miles using the Cleveland Trail emergency access, and 2.9 miles using the Sugarbush Drive access. The emergency travel time using nationally recognized standard NFPA 1142 C.11b at 35 mph, is 3.9 minutes using Cleveland Trail and 5.6 minutes using Sugarbush Drive. ~~would be no more than five minutes. An approximate speed of 45 mph was used to determine this time~~. Therefore, utilizing the Cleveland Trail access, the~~This~~ response time is within the five-minute criterion for single-family residential lots less than two acres in size, as set by the Public Facility Element of the County General Plan.

Based on the above-noted Project design features and considerations, impacts associated with wildfire hazards would be **less than significant**.

3.1.2.3 *Cumulative Impacts Analysis*

As discussed above, the Project area is susceptible to wildland fires. The cumulative project study area for wildland fire consists of the service area of the VFPD, because it ~~is~~ would be responsible for providing fire service on the Project site, as well as other properties within its service area. A total of 10 cumulative projects have been identified within this service area (Figure 3.1.2-1; Table 3.1.2-2). The potential for wildland fires resulting in the loss of life or property is generally unique to each site.

Each cumulative project, including the Proposed Project, would result in an increased population in wildland interface and urbanized areas, thereby potentially increasing the risk of wildland fires through factors such as human carelessness, arson and vehicle fires. Proposed projects under review are, however, subject to the fire~~s~~ code~~s~~ and regulations and the preparation of FPPs to determine the potential risk for wildland fires. As with the Proposed Project, any future projects in the site vicinity noted in Table 3.1.2-2 would be required to implement, as appropriate, similar site-specific measures (e.g., fuel modification zones, fire walls, appropriate access roads, fire hydrants) to address potential impacts from wildfires. A proposed project cannot be approved unless the project is determined to meet the fire codes and regulations for the fire authority having jurisdiction over the proposed project.

Although the Proposed Project would eliminate some wildland area, it would not result in an increase of the wildland interface, as the Project development footprint would abut existing development: Rather, the Proposed Project would simply move the location of the interface approximately 800 feet to the east. Other cumulative projects abut developed areas (e.g., Nos. 1, 4, 52 through 54, 63 through 66). These cumulative projects also would not be expected to increase the wildland interface. Only two cumulative projects (Nos. 11 and 63) would be developed in a location that does not abut already developed areas; therefore, these two cumulative projects would result in an increase in the wildland interface.

FPPs for the cumulative projects, including the Proposed Project, will utilize the best available technologies for fire protection as part of project design, and further demonstrates that the rate of spread of fire would be reduced enough for adequate response by the fire authority having jurisdiction. Specifically in the case of the Proposed Project, implementation of the required Project design features actually would provide an increased level of protection to homes located west of the Project site, which currently are located immediately at the wildland/urban interface and do not incorporate the same level of

fire-protective features. Through the Proposed Project's and cumulative projects' compliance with the numerous fire-related regulations and incorporation of fire projection measures, the potential cumulative impacts from wildland fires would be **less than significant**.

3.1.2.4 *Significance of Impacts Prior to Mitigation*

As stated above, based on the above-noted Project design features and considerations, impacts associated with wildfire hazards would be **less than significant**.

3.1.2.5 *Mitigation*

Because impacts would be less than significant, mitigation is not required.

3.1.2.6 *Conclusion*

Implementation of the Proposed Project would not result in significant impacts related to wildfires. The Project would include environmental design considerations that would provide fire protection. These considerations are detailed in Chapter 7.2 and would include incorporation and maintenance of fuel modification zones, exclusion of prohibited plant materials (refer to Table 3.1.2-1), incorporation of applicable ignition and fire resistance measures for all structures, limiting structure heights where necessary, compliance with applicable requirements with regard to design and operation of all access-related facilities and fire-related water supplies, and provision of smoke detectors in each house.

3.1.3 Hydrology and Water Quality

A Hydrology Report and a Storm Water Management Plan (SWMP) have been prepared for the Proposed Project by BHA, Inc. (BHA 2009a and 2009b). These studies are summarized below along with other applicable data, with the complete reports included in Appendices J and K of this EIR, respectively.

3.1.3.1 *Existing Conditions*

The Project site is located within the Carlsbad Hydrologic Unit (HU), one of 11 major drainage areas identified in the San Diego RWQCB *Water Quality Control Plan for the San Diego Basin* (Basin Plan, 1994 as amended). The Carlsbad HU is a triangular-shaped area that includes approximately 210 square miles and extends from Lake Wohlford on the east to Solana Beach-Carlsbad along the coast (Figure 3.1.3-1). Principal drainages in the Carlsbad HU include San Marcos, Escondido, Agua Hedionda and Buena Vista creeks, and several associated lagoons are located along the coast (i.e., Batiquitos, San Elijo, Agua Hedionda and Buena Vista lagoons). The Carlsbad HU is divided into a number of hydrologic areas (HAs) and subareas (HSAs) based on local drainage characteristics, with the Project site located within the Agua Hedionda HA and the Buena HSA. Buena Creek is located just north and west of the Project site, and continues southwest for approximately 2.3 miles before discharging into Agua Hedionda Creek. The combined flow in Aqua Hedionda Creek then flows approximately five miles west before entering Aqua Hedionda lagoon in the City of Carlsbad. Average annual precipitation in the Project vicinity (Vista) is approximately 13.7 inches per year, with January (3.13 inches), February (2.66 inches) and March (2.83 inches) comprising the wettest months, and June (0.13 inches), July (0.05 inches) and August (0.11 inches) typically the driest months (weather.com 2009).

The Project site includes portions of three local drainage basins totaling approximately 188 acres (Basins A, B and C, refer to the Existing Condition Map in BHA 2009a in Appendix J). These three basins encompass much of the 115-acre Project site, as well as associated off-site watershed areas. A small (approximately five-acre) area in the southeastern-most corner of the site is located outside of the three

noted basins, and drains generally south to San Marcos Creek. Because this portion of the site is not within the proposed development area and would be permanently preserved as open space, it is not discussed further in this section. Surface drainage within the remainder of the Project site and adjacent areas (including the off-site portions of Basins A, B and C and the proposed off-site facilities) flows generally west to Buena Creek, with some local variation based on topography. Existing 100-year storm flow from (leaving) the Project site (including flows from off-site areas as noted) is approximately 330.8 cubic feet per second (cfs). This includes 243.2 cfs discharged from the northwestern portion of the site (Basin A) into an unnamed tributary to Buena Creek, 69.1 cfs from the west-central portion of the site (Basin B) that flows into a shallow channel draining to Buena Creek, and 18.5 cfs from the southwestern portion of the site (Basin C) that enters an adjacent driveway structure and continues west-southwest as overland flow to Buena Creek.

The Project site is currently vacant and consists primarily of native habitat and previously disturbed but undeveloped areas. Existing on-site improvements are limited mainly to unpaved roads and trails, along with some remnants of previous agricultural use in the northeastern (avocado trees) and southern (olive trees) portions of the site. No known drainage facilities are present on site, with downstream drainage improvements including surface and subsurface storm drains associated with local development, as well as crossing structures along Buena and Agua Hedionda creeks at larger roadways.

Flood Hazards

The Federal Emergency Management Agency (FEMA) has mapped flood hazards in the Project site and vicinity. The majority of the Project site and adjacent areas are designated as Zone X, or areas outside the 500-year (and therefore the 100-year) floodplain (FEMA 1999, and 1997a through 1997c). Portions of both the Project site and the associated off-site facilities extend into the mapped Buena Creek floodplain boundaries, however, as follows: (1) the northwestern-most corner of the Project site is located within mapped 100- and 500-year floodplains associated with Buena Creek; and (2) the proposed off-site improvements to Cleveland Trail extend across Buena Creek, and encompass associated portions of the mapped 100- and 500-year floodplains.

Groundwater

Groundwater is not known to occur within the Project site and immediate vicinity, with the closest mapped groundwater bodies located approximately 3.2 miles south of the site in association with San Marcos Creek and Batiquitos Lagoon (California Department of Water Resources [DWR] 2003). The Project Geotechnical Investigation (Appendix M) included the excavation of 21 on-site trenches extending to depths of between approximately 3 and 14 feet. No groundwater was observed during these excavations, although it is noted that "[d]ue to the relatively low permeability of the hard, unfractured metamorphic bedrock, localized zones of perched water may develop following episodes of heavy precipitation and/or excessive irrigation" (Western 2002). Perched groundwater generally consists of one or more unconfined aquifers supported by impermeable or semi-permeable strata, with such aquifers typically limited in volume and extent but variable with conditions including seasonal precipitation as noted.

Water Quality

Surface flows within the site consist predominantly of runoff from storm events, with some flows from off-site landscaping and agricultural irrigation also potentially entering the site. No known water quality data are available for runoff within or adjacent to the site, although storm water and irrigation flows are typically subject to wide variations in water quality with factors such as runoff volume, velocity and

adjacent land uses. Summaries of typical contaminant sources and loadings for various land use types are shown in Tables 3.1.3-1 and 3.1.3-2.

As previously described, the principal surface waters located downstream from the Project site include Buena and Agua Hedionda creeks, as well as Agua Hedionda Lagoon and adjacent portions of the Pacific Ocean. Available water quality data for these areas include historic and current quantitative monitoring/testing and biological assessment (bioassessment) studies, as well as bi-annual qualitative assessments conducted by the SWRCB and RWQCB. These efforts are associated with requirements under regulatory standards including the federal CWA, NPDES, County Storm Water Standards, the RWQCB Municipal Storm Water Permit, and the RWQCB Basin Plan (refer to the discussion of Regulatory Framework below for additional information). A summary of water quality data for areas downstream of the Project site is provided below.

Wet Season Sampling

Wet season sampling was conducted at two locations along Agua Hedionda Creek between 2001 and 2008 (with the two monitoring stations located approximately 3.2 and 5.5 miles downstream of the Project site). These sampling efforts encompassed a total of 22 storm events, including 3 each during the 2001/2002 to 2006/2007 storm seasons, and 4 events during the 2007/2008 season (Weston Solutions, Inc. [Weston] 2009). The results of these efforts are summarized as follows: (1) regulatory standards were exceeded at a high frequency for contaminants/conditions including total dissolved solids (TDS), total suspended solids (TSS), turbidity, total and fecal coliform bacteria (indicator bacteria), and enterococci bacteria; and (2) regulatory standards were exceeded at a low frequency for contaminants/conditions including conductivity, ammonia, chlorpyrifos and diazinon (pesticides), orthophosphate, and toxicity to select aquatic organisms (Weston 2009).

Dry Weather Sampling

Dry weather sampling was conducted between 2003 and 2007 at numerous locations downstream of the Project site, including portions of Buena and Agua Hedionda creeks. This program is focused on collecting dry season samples from storm drain facilities to identify urban pollutants and sources. Data from the most recent (2007) dry weather sampling indicate that water quality objectives were most commonly exceeded for contaminants/conditions including turbidity, indicator bacteria, orthophosphate, conductivity and ammonia (Weston 2009).

Bioassessment Studies

Bioassessment testing involves evaluation of criteria including the taxonomic richness (i.e., number of taxonomic groups) and diversity (i.e., species diversity within taxonomic groups) of benthic macroinvertebrate (BMI) communities. Bioassessment studies have been conducted at several downstream locations along Agua Hedionda Creek between 2001 and 2008, with all tested sites qualitatively ranked for the condition of BMI communities. Test results for all of the noted locations/dates identified Index of Biotic Integrity (IBI) ratings of poor or very poor, which indicates moderate to high levels of biological community impairment (Weston 2009). Because BMI communities are sensitive to water quality (including criteria such as dissolved oxygen, sedimentation, nutrients and chemical/organic pollutants), the noted data for Agua Hedionda Creek reflect (at least in part) generally poor local water quality conditions.

Bi-annual Clean Water Act Assessments

The SWRCB and RWQCB produce bi-annual qualitative assessments of statewide and regional water quality conditions, with these assessments focused on federal CWA Section 303(d) impaired water listings and priority status for assignment of total maximum daily load (TMDL) requirements. The Section 303(d) and TMDL assessments involve prioritizing waters on the basis of water quality (i.e., impaired) status and the necessity for assigning quantitative contaminant load restrictions (i.e., TMDL), with these data submitted to the USEPA for review and approval. The most current (2006) approved assessment identifies the following waters as impaired in the Project site vicinity: (1) 4.8 miles of Buena Creek listed for DDT, nitrate/nitrite and phosphate; (2) 7 miles of Agua Hedionda Creek listed for manganese, selenium, sulfates and TDS; and (3) 6.8 acres of Aqua Hedionda Lagoon listed for indicator bacteria and sedimentation/siltation. Identified TMDL completion dates include 2006 for indicator bacteria in Aqua Hedionda Lagoon, and 2019 for all other noted contaminants and locations (SWRCB 2007).

Groundwater Quality

No known groundwater quality data are available for the Project site and vicinity. Shallow groundwater was not observed on site during geotechnical exploration, although the potential exists for perched aquifers to occur from seasonal precipitation and/or irrigation. Water quality for such perched aquifers generally would be expected to exhibit similar conditions as described above for surface waters.

Water Quality Summary

Surface water quality in the Project site and vicinity (including applicable portions of Buena and Agua Hedionda creeks) is assumed to be generally moderate to poor, based on the described available data. These assumed conditions are attributed primarily to the presence of urban and agricultural development in upstream watersheds. Groundwater quality in the Project site region is also assumed to be generally moderate to poor, for reasons similar to those noted for surface water.

Regulatory Framework

The Proposed Project is subject to a number of regulatory requirements associated with federal, state and local guidelines as summarized below, with additional information provided under the discussion of Project impacts as appropriate.

National Pollutant Discharge Elimination System Requirements

Specific NPDES requirements applicable to the Project include the following: (1) the General Construction Activity Storm Water Permit (Construction Permit, NPDES No. CAS000002); (2) the General Groundwater Extraction Waste Discharge Permit For Discharge To Surface Waters in the San Diego Region Except For San Diego Bay (Groundwater Permit, NPDES No. CAG919002); and (3) the Municipal Permit (NPDES No. CAS0108758) and related County standards.

General Construction Activity Storm Water Permit

Conformance with the Construction Permit is required prior to development of applicable sites exceeding one acre, with this permit issued by the SWRCB under an agreement with the USEPA. Specific conformance requirements include implementing a Storm Water Pollution Prevention Plan (SWPPP) and an associated monitoring program, as well as a Storm Water Sampling and Analysis Strategy (SWSAS) for applicable projects (i.e., those discharging directly into waters impaired due to sedimentation or

involving potential discharge of non-visible contaminants that may exceed water quality objectives). These plans identify detailed measures to prevent and control the off-site discharge of contaminants in storm water runoff. Specific pollution-control measures require the use of best available technology economically achievable (BAT) and/or best conventional pollutant control technology (BCT) levels of treatment, with these requirements implemented through best management practices (BMPs). While site-specific measures vary somewhat with conditions such as proposed grading, slope, and soil characteristics, detailed guidance for construction-related BMPs is provided in the Construction Permit text and County standards. Additional sources for construction-related BMPs include the *EPA National Menu of Best Management Practices for Storm Water Phase II* (USEPA 2009), and the California Stormwater Quality Association (CASQA) *Storm Water Best Management Practices Handbooks* (CASQA 2003).

General Groundwater Extraction Waste Discharge Permit

Conformance with the noted Groundwater Permit is required by the RWQCB prior to disposal of extracted groundwater, pursuant to Order No. R9-2008-0002 for the Project site. This requirement is generally applicable to all groundwater discharge regardless of volume, with certain exceptions noted in the permit text. Specific requirements for permit conformance include: (1) submitting a Notice of Intent to the RWQCB; (2) implementing an appropriate sampling and analysis/monitoring program; (3) providing at least 30 days notification to the appropriate local agency prior to discharging to a municipal storm drain system; (4) conforming with applicable water quality standards (e.g., through appropriate BMPs), including, but not limited to, the Basin Plan, CWA, State Antidegradation and Implementation policies, Porter-Cologne Water Quality Control Act, and Ocean Plan; and (5) submittal of applicable monitoring reports.

Municipal Storm Water Permit

The Municipal Permit (RWQCB Order No. R9-2007-0001) is intended to protect environmentally sensitive areas and provide conformance with pertinent hydrology and water quality standards. Associated requirements involve using applicable planning, design, operation, treatment, and enforcement measures to maintain predevelopment runoff volume and velocity levels to the maximum extent practicable (MEP), avoid/address potential hydromodification[6] impacts, and reduce pollutant discharges to the MEP. Specifically, these measures include: (1) using jurisdictional controls to regulate flows and protect water quality; (2) requiring coordination between individual jurisdictions to provide watershed-based hydrology/water quality protection; (3) implementing applicable site design, LID[7], source control, priority project, and/or treatment control BMPs to avoid, reduce and/or mitigate effects including increased erosion and sedimentation, hydromodification and the discharge of contaminants in urban runoff; and (4) using appropriate monitoring, reporting and enforcement efforts to ensure proper implementation, documentation and (as appropriate) modification of permit requirements.

The Municipal Permit also requires co-permittees to fund and implement urban runoff management programs (URMPs) to help reduce runoff and contaminant discharges to the MEP. The URMPs were conducted on a jurisdictional basis for the first two years, and were expanded to include a watershed-

[6] Hydromodification is defined in the Municipal Permit as the change in natural watershed hydrologic processes and runoff characteristics (infiltration and overland flow) caused by urbanization or other land use changes that result in increased stream flows, sediment transport, and morphological changes in the channels receiving the runoff.

[7] The LID process is intended to mimic predevelopment hydrologic conditions by using design practices and techniques to effectively capture, filter, store, evaporate, detain and infiltrate runoff close to its source.

based approach for subsequent efforts. The watershed-based approach has been implemented for the Project site and applicable downstream areas through the current Carlsbad Watershed URMP (WURMP, City of Carlsbad et al. 2008). Pursuant to the described Municipal Permit requirements, the County (along with other applicable co-permittees) participated in developing the Standard Urban Storm Water Mitigation Plan (SUSMP), prepared a local (County-specific) SUSMP, and adopted related storm water standards and ordinances as described below under County Requirements.

Basin Plan Requirements

The RWQCB Basin Plan establishes a number of beneficial uses and water quality objectives for surface and groundwater resources. Beneficial uses are generally defined in the Basin Plan as "the uses of water necessary for the survival or well being of man, plus plants and wildlife." Identified beneficial uses for the Project site and applicable downstream areas of the Buena and Agua Hedionda creek watersheds include municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), contact and non-contact water recreation (REC1 and REC2), warm freshwater habitat (WARM), and wildlife habitat (WILD). Identified beneficial uses for Agua Hedionda Lagoon include IND; REC1 and REC2; commercial and sport fishing (COMM); biological habitats of special significance (BIOL); estuarine habitat (EST); WILD; rare, threatened, or endangered species (RARE); marine habitat (MAR); aquaculture (AQUA); migration of aquatic organisms (MIGR); spawning, reproduction, and/or early development (SPWN); and shellfish harvesting (SHELL). Identified beneficial uses for groundwater in the Buena HSA include MUN, AGR and IND (RWQCB 1994 as amended).

Water quality objectives identified in the Basin Plan are based on established beneficial uses and are defined as "the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses." Water quality objectives identified for surface and groundwater resources in the Agua Hedionda HA are summarized in Table 3.1.3-3.

County of San Diego Requirements

Pursuant to the NPDES Municipal Permit, the County has adopted the following requirements: (1) the Watershed Protection, Stormwater Management and Discharge Control Ordinance/Stormwater Standards Manual (Ordinance No. 9926, 2008a); (2) the LID Handbook (2007a); and (3) the County SUSMP (2008b). These regulations provide direction for applicants to determine if and how they are subject to County and related Municipal Permit standards, and identify requirements for the inclusion of permanent site design, LID, source control, priority project and/or treatment control BMPs. The County Storm Water Ordinance/Manual also requires construction-related BMPs to address issues including erosion and sedimentation. The County may, at its discretion, require the submittal and approval of a SWPPP to address construction-related storm water issues prior to site development (with such requirements in addition to the NPDES SWPPP criteria described above).

The San Diego County Hydrology Manual (2003) identifies procedures for analyzing flood and storm water conditions in the County. Specifically, these procedures include methods to estimate storm flow peaks, volumes and time distributions. These data are used in the design of storm water management facilities to ensure appropriate dimensions and capacity (typically 100-year storm flow volumes), pursuant to applicable requirements in the San Diego County Design and Procedure Manual (1993).

3.1.3.2 *Analysis of Project Effects and Determination as to Significance*

Drainage Alteration

Guideline for the Determination of Significance

Impacts associated with drainage would be considered potentially significant if the project would:

1. Substantially alter the existing drainage pattern of the site or area, including through the alteration of a drainage course, stream or river, in a manner which would result in substantial erosion or siltation on or off site.

This guideline is based on the County's Guidelines for Determining Significance – Hydrology (July 30, 2007e).

Analysis

As described under Existing Conditions, surface drainage within the Project site (including all areas proposed for development) moves primarily to the west. Associated flows are conveyed to Buena Creek via existing drainages and storm drain facilities, and ultimately reach Agua Hedionda Creek, Agua Hedionda Lagoon and the Pacific Ocean. Project implementation would not entail substantial alteration of local drainage patterns, with the described existing flow directions and locations within, from and downstream of the site to remain essentially unchanged. Proposed drainage conditions/facilities are summarized below, with additional information provided in Section I of the Project Hydrology Report (Appendix J).

- The majority of Basin A within the site would remain undeveloped, with associated drainage facilities consisting of culverts located beneath the proposed extension of Sugarbush Drive; curb and gutter structures on Lots 21, 22, 24 and 45; curb inlets near Lot 21; a detention/bioretention basin on the northern portion of Lot F; and an 18-inch diameter storm drain pipeline conveying flows from the noted detention/bioretention basin into an existing tributary drainage to Buena Creek (refer to Exhibit B in Appendix J). Post-development drainage patterns and directions in Basin A would be essentially the same as the existing condition. Specifically, flows from the developed portions of Basin A would enter the proposed curb inlets near Lot 21 and continue into the noted detention/bioretention basin on Lot F, before being discharged into the 18-inch storm drain and ultimately entering Buena Creek via an existing tributary drainage. Flows patterns and directions within the undeveloped portions of Basin A would be the same as those described under Existing Conditions.

- Post-development drainage in Basin B would include flows generated within the central portion of the proposed development area, as well as flows from the off-site portion of Basin B to the east. Off-site flows would be conveyed to the eastern boundary of the proposed development area via two drainage channels, and would then enter the proposed storm drain system. Proposed storm drain facilities in Basin B would include a series of curb inlets and pipelines ranging in diameter from 18 to 30 inches. These facilities would collect and convey the combined on- and off-site flows in Basin B to a detention/bioretention basin on the southern portion of Lot F. Flows from the basin would be discharged from the Project site through a shallow drainage channel, and would continue west to Buena Creek.

- Post-development drainage in Basin C would be associated with proposed lots in the southern portion of the site. Flows in Basin C would be collected in curb inlets located near Lot 15, and conveyed to a detention/bioretention basin on Lot E via a series of storm drain pipelines. Runoff

leaving the site from the basin on Lot E would enter an existing driveway, which would be repaved and have a berm added as part of the Proposed Project to improve the drainage capacity of the existing driveway. Flows within the off-site driveway structure would continue generally west-southwest to Buena Creek, as previously described under Existing Conditions.

Based on the described conditions, implementation of the Proposed Project would not substantially alter on- or off-site drainage patterns or directions, including alteration of a drainage course that would generate substantial on- or off-site erosion or siltation (with additional discussion of potential erosion-related impacts provided below under the discussion of water quality). Accordingly, Proposed Project impacts related to drainage alteration or associated on- or off-site erosion and siltation are anticipated to be **less than significant.**

Flow Velocities/Rates

Guideline for the Determination of Significance

Impacts associated with drainage would be considered potentially significant if the project would:

2. Result in increased velocities and peak flow rates exiting the project site that would cause flooding downstream or exceed the stormwater drainage system capacity serving the site.

This guideline is based on the County's Guidelines for Determining Significance – Hydrology (July 30, 2007).

Analysis

Implementation of the Proposed Project would result in the addition of impervious surfaces including pavement and structures, with such areas increasing both the volume and velocity of runoff within the Project site by reducing infiltration capacity and concentrating flows. As previously noted, the existing total 100-year storm flow from the Project site is approximately 330.8 cfs, with these flows discharging from the site at three principal locations along the western property boundary. Based on the proposed design conditions, total calculated post-development 100-year runoff from the Project site would be approximately 343.7 cfs, including 238.9 cfs from Basin A, 84 cfs from Basin B and 20.8 cfs from Basin C. As noted above under the discussion of drainage alteration, post-development flows within Basins A, B and C would be directed into three detention/bioretention basins prior to off-site discharge. These basins would regulate the described post-development flows, and would result in a net reduction of 100-year flow volumes. Specifically, regulated flows from the site would total approximately 315.1 cfs (a reduction of 15.7 cfs from existing flow levels), including 236.3 cfs from Basin A, 63.2 cfs from Basin B, and 15.6 cfs from Basin C (refer to Table 1-1 in Appendix J).

All proposed new and modified storm drain facilities would be designed to accommodate a 100-year storm event, per requirements in the County of San Diego Design and Procedure Manual (County 1993), with no associated capacity or flooding impacts to (or in association with) on- or offsite storm drains. In addition, energy dissipation structures (e.g., riprap aprons) would be installed at all applicable locations (e.g., basin and culvert outlets) to reduce flow velocities and potential on- and off-site erosion/siltation potential.

The Project design would preserve approximately 77.1 acres (or approximately 67 percent) of the site as permanent open space, and would include extensive landscaping within the developed areas. Both of these design features would increase pervious areas and help to reduce runoff volumes and velocities, with proposed landscaping to incorporate native and drought-tolerant varieties to the maximum extent

feasible (to reduce irrigation requirements). Associated irrigation systems would include management techniques to reduce flows and eliminate runoff, such as tailoring irrigation schedules to specific landscaping needs (i.e., to avoid over-watering), and the use of moisture and pressure sensors to limit irrigation during wetter periods and/or shut off flows to broken pipelines/sprinkler heads.

Based on the described conditions, Proposed Project impacts related to runoff volumes/velocities, associated flooding hazards, or on/off-site storm drain capacity would be **less than significant.**

It should also be noted that the Proposed Project is exempt from the Interim Hydromodification Criteria identified in County storm water requirements and the NPDES Municipal Permit, based on the fact that the Project would disturb fewer than 50 acres (Appendix K). Based on this exemption and the fact that the Proposed Project would result in a net reduction of off-site flows, Project implementation would not result **less than significant** impacts related to hydromodification.

Water Surface Elevations

Guideline for the Determination of Significance

Impacts associated with drainage would be considered potentially significant if the project would:

3. Increase the water surface elevation in a watercourse within a watershed equal or greater than one square mile, by one foot or more in height.

This guideline is based on the County's Guidelines for Determining Significance – Hydrology (July 30, 2007).

Analysis

As described above under the discussion of runoff volumes/velocities, the proposed detention/bioretention basins would reduce existing 100-year flow levels from the Project site by approximately 15.7 cfs. Based on this consideration and the fact that on-site flows would be contained within proposed storm drain facilities, associated Project impacts related to water surface elevation increases would be **less than significant.**

As described under Existing Conditions (Flood Hazards), portions of both the Project site and the associated off-site improvements to Cleveland Trail extend into mapped floodplains along Buena Creek. While such conditions could potentially affect the extent and elevation of associated surface waters through (for example) the placement of obstructions, **no associated Project-related impacts** would occur based on the following considerations: (1) the portion of the Project site located within mapped floodplains would be preserved as permanent open space, with no associated effects to the floodplains or related surface water elevations; and (2) the proposed off-site improvements to Cleveland Trail would be limited to resurfacing the existing roadway footprint, with no associated excavation, grading, alteration of existing drainage facilities, or placement of structures/facilities that would potentially obstruct flows and/or impact the extent or elevation of surface waters.

Water Quality

Guidelines for the Determination of Significance

Impacts associated with water quality would be considered potentially significant if the project would:

4. Result in non-compliance with the standards set forth in the County Stormwater Standards Manual, Regulatory Ordinances Section 67.813, as amended, or the Additional Requirements for Land Disturbance Activities set forth in Regulatory Ordinances, Section 67.
5. Drain to a tributary of an impaired water body as listed on the Clean Water Act Section 303(d) list and contribute additional pollutant(s) for which the receiving water is already impaired.
6. Contribute pollution in excess of that allowed by applicable state or local water quality objectives, or cause or contribute to the degradation of beneficial uses.
7. Violate any applicable federal, state or local "Clean Water" statutes or regulations, including but not limited to the Federal Water Pollution Control Act, California Porter-Cologne Water Quality Control Act, and the County of San Diego Watershed Protection, Stormwater Management, and Discharge Control Ordinance.

Guidelines No. 4 through 7 are based on the County's Guidelines for Determining Significance – Surface Water Quality (July 30, 2007).

Analysis

Potential Project-related water quality impacts are associated with both short-term construction activities and long-term operation and maintenance. Project-related activities would not result in any direct effects to groundwater quality through activities such as underground storage of hazardous materials. Accordingly, potential impacts to groundwater quality would be limited to the percolation of surface runoff and associated contaminants generated within the Project site and associated off-site facility areas. The following assessment of potential water quality impacts is therefore applicable to both surface and groundwater resources.

Short-term Construction Impacts

Potential water quality impacts related to Project construction include erosion/sedimentation, the on-site use and storage of construction-related hazardous materials (e.g., fuels, etc.), and disposal of extracted groundwater (if required), as described below.

Erosion and Sedimentation. Proposed Project-related excavation, grading and construction activities could potentially result in related erosion and off-site sediment transport (sedimentation). Project activities would involve the removal of surface stabilizing features such as vegetation, excavation of existing compacted materials from cut areas, redeposition of excavated (and/or imported) material as fill in proposed development sites, potential sediment generation from paving activities, and potential erosion from disposal of extracted groundwater (if required). Project-related erosion could result in the influx of sediment into downstream receiving waters (including 303[d] listed sections of Agua Hedionda Creek/Lagoon as described under Existing Conditions), with associated water quality effects such as turbidity and the transport of other contaminants that tend to adhere to sediment particles.

While graded, excavated and filled areas associated with construction activities ultimately would be stabilized through efforts such as compaction and installation of hardscape and landscaping, erosion potential would be higher in the short-term than for existing conditions. Developed areas would be

especially susceptible to erosion between the beginning of grading/construction and the installation of pavement or establishment of permanent cover in landscaped areas. Proposed Project long-term erosion and sedimentation impacts would be **less than significant** considering that developed areas would be stabilized through installation of hardscape or landscaping. The Project also would incorporate long-term water quality controls pursuant to County and NPDES guidelines, including (among other efforts) measures that would avoid or reduce off-site sediment transport. Specifically, this would include efforts such as the use of detention/bioretention basins, vegetated drainage swales, energy dissipators and irrigation controls, as well as drainage facility maintenance (i.e., to remove accumulated sediment).

Short-term erosion and sedimentation impacts would be addressed through conformance with the NPDES Construction Permit and County Stormwater Ordinance/Manual, including the implementation of an authorized SWPPP to address (among other issues) erosion and sedimentation concerns. While specific BMPs related to this issue would be determined during the SWPPP process based on site characteristics (soils, slopes, etc.) and proposed grading, they would likely include standard industry measures and guidelines contained in the Project SWMP (Appendix K), NPDES Construction Permit text and County Stormwater Ordinance/Manual, as well as the additional regulatory and industry sources identified above under Regulatory Framework. Typical erosion and sediment control measures that would likely be implemented as part of the Project SWPPP are summarized in Table 3.1.3-4.

Erosion and sedimentation BMPs implemented for the Proposed Project would be further defined during the NPDES/County permit and SWPPP review process, with the resulting measures taking priority over the more general types of measures listed in Table 3.1.3-4. Based on implementation of appropriate erosion and sediment control BMPs as part of, and in conformance with, the Project SWPPP (and associated regulatory requirements), construction-related water quality impacts associated with erosion and sedimentation would be **less than significant**.

Construction-related Hazardous Materials. Project construction would involve the on-site use and/or storage of hazardous materials such as fuels, lubricants, solvents, concrete, paint and portable septic system wastes. The accidental discharge of such materials during Project construction could potentially result in significant impacts if such materials reach downstream receiving waters, particularly materials such as petroleum compounds that can be toxic to aquatic species in low concentrations. Implementation of a SWPPP would be required under NPDES and (potentially) County guidelines as noted above for erosion and sedimentation, and would include detailed measures to avoid or mitigate potential impacts related to the use and potential discharge of construction-related hazardous materials. While detailed BMPs would be determined as part of the NPDES/SWPPP process based on site-specific parameters, they would likely include standard measures from the Project SWMP, NPDES Permit and County Stormwater Ordinance/Manual, as well as the regulatory/industry sources referenced under Regulatory Framework. Typical measures associated with construction-related hazardous materials anticipated to be implemented as part of the Project SWPPP are summarized in Table 3.1.3-5.

Construction-related hazardous material controls implemented for the Project would be further defined during the NPDES permitting and NPDES/County SWPPP process, with the resulting BMPs taking priority over the more general types of measures in Table 3.1.3-5. Based on the use of appropriate BMPs as part of a SWPPP under applicable regulatory guidelines, Proposed Project water quality impacts from construction-related hazardous materials would be **less than significant**.

Disposal of Extracted Groundwater. While shallow groundwater is not expected to be encountered during Project-related excavation and construction, the potential occurrence of perched aquifers could result in requirements for the extraction and disposal of groundwater to facilitate Project construction. Disposal of groundwater extracted during construction activities into local drainages and/or storm drain facilities could potentially generate significant water quality impacts through erosion/sedimentation (e.g.,

if discharged onto graded areas or slopes), or the possible occurrence of contaminants in local groundwater aquifers. Project construction would require conformance with applicable NPDES Groundwater Permit criteria prior to disposal of extracted groundwater (as outlined under Regulatory Framework). While specific BMPs to address potential water quality concerns from disposal of extracted groundwater would be determined based on site-specific parameters, they would likely include the following types of standard measures derived from the NPDES Permit text and the previously referenced regulatory/industry sources:

- Use erosion/sedimentation controls similar to those described in Table 3.1.3-4.
- Test extracted groundwater for appropriate contaminants prior to discharge.
- Treat extracted groundwater prior to discharge, if required, to provide conformance with applicable regulatory criteria (e.g., through methods such as filtration, aeration, adsorption, disinfection and/or conveyance to a municipal wastewater treatment plant).
- Remove contaminated groundwater for off-site treatment and disposal by a licensed operator in conformance with applicable legal requirements.

Based on the required conformance with NPDES Groundwater Extraction and Waste Discharge Permit standards and the implementation of related BMPs, the Proposed Project-related disposal of extracted groundwater is expected to have a **less than significant** impact to water quality.

Long-term Operation and Maintenance Impacts

The Project SWMP (Appendix K) identifies pollutants of concern and associated BMPs related to development of the Proposed Project, based on procedures identified in the County Stormwater Ordinance/Manual and SUSMP, as well as the related NPDES Municipal Permit. The Proposed Project is identified as a SUSMP "Priority Project" due to the inclusion of proposed residential, hillside and roadway development. Anticipated contaminants associated with the Proposed Project include sediment, nutrients, heavy metals, organic compounds, trash and debris, oxygen demanding substances, oil and grease, bacteria and viruses, and pesticides (Appendix K). Urban contaminants accumulate in areas such as streets, parking areas and drainage facilities, and are picked up in runoff during storm events. Runoff within the Project site would increase as a result of constructing impervious surfaces, with a corresponding increase in contaminant loading potential. Based on these conditions, long-term Project operation could result in the on- and off-site transport of urban contaminants and associated significant effects such as increased turbidity, oxygen depletion and toxicity to attendant species in downstream receiving waters. Affected downstream waters may include portions of Buena and Agua Hedionda creeks, as well as Agua Hedionda Lagoon and associated coastal waters. As noted above in Section 3.1.3.1, portions of Buena Creek and Agua Hedionda Creek/Lagoon downstream of the Project site are included on the current (2006) list of CWA Section 303(d) impaired waters.

The Proposed Project would conform to applicable NPDES and County storm water standards, with such conformance to include the use of appropriate post-construction site design, LID, source control and/or treatment control BMPs. Specific proposed BMPs are identified in the Project SWMP (Appendix K), with these measures summarized below and followed by a discussion of the associated BMP monitoring and maintenance requirements.

Site Design BMPs. Site design BMPs are intended to avoid and/or control post-development runoff, erosion potential and contaminant generation by mimicking the natural hydrologic regime to the MEP.

Specific site design BMPs identified in the Project SWMP include measures such as: (1) avoiding or minimizing impacts to water courses, floodplains, steep slopes and wetlands; (2) minimizing impervious areas through efforts such as minimizing sidewalk widths and using pervious pavement in appropriate areas if feasible; (3) maximizing the preservation of natural areas; (4) incorporating native or drought-tolerant landscaping varieties and irrigation management techniques; (4) incorporating unlined facilities (i.e., detention/bioretention basins, vegetated swales and landscaping) into the Project drainage system to provide filtering and infiltration capacity; (5) installing energy dissipators to reduce flow velocities and erosion potential; (6) providing smooth transitions between drainage outlets and channels to reduce turbulence and scour; and (7) protecting manufactured slopes through efforts such as minimizing slope dimensions/grades (e.g., by using retaining walls), rounding and shaping to reduce flow concentrations, and collecting flows in stabilized drains and channels (refer to Tables 7 and 9 in Appendix K for additional information). All of the proposed site design BMPs would help reduce long-term urban contaminant generation by reducing runoff volumes and velocities, retaining permeable areas, increasing on-site filtering and infiltration, and minimizing erosion/sedimentation potential.

LID BMPs. LID measures are intended to mimic predevelopment hydrologic conditions by using design practices and techniques to effectively capture, filter, store, evaporate, detain and infiltrate runoff close to its source. Specific LID BMPs identified in the Project SWMP include: (1) preserving approximately 77 acres of predominantly native habitat as permanent open space; (2) clustering Project development to reduce disturbance and provide setbacks from drainages; (3) restricting heavy construction equipment access in open space areas; (4) reusing native topsoil and/or incorporating soil amendments in landscaped areas; (5) directing runoff from development into pervious areas such as detention/bioretention basins, vegetated swales and landscaping; and (6) using "smart" irrigation systems, including features such as tailored irrigation schedules to avoid over-watering, and moisture/pressure sensors to limit irrigation during wetter periods and/or shut-off flows to broken pipelines/sprinkler heads (refer to Table 8 in Appendix K for additional information).

Source Control BMPs. Source control BMPs are intended to avoid or minimize the introduction of contaminants into storm drains and natural drainages by reducing on-site contaminant generation and off-site contaminant transport to the MEP. Specific source control BMPs identified in the Project SWMP include measures such as: (1) installing "no dumping" stencils/tiles at applicable locations (e.g., storm drain inlets); (2) using landscape and irrigation system design measures as previously described to reduce irrigation and chemical application requirements; (3) providing shared driveway access and directing associated runoff into landscaped areas where feasible; (4) implementation of regular street sweeping/vacuuming; and (5) conducting regular drainage facility inspection and maintenance. All of the identified source control BMPs would help to improve long-term water quality within and downstream from the Project site by avoiding or minimizing contaminant generation and exposure to storm flows at the source (refer to Table 10 in Appendix K for additional information).

Treatment Control BMPs. Treatment control (or structural) BMPs are designed to remove pollutants from urban runoff for a design storm event to the MEP through means such as filtering, treatment or infiltration. The use of identified site design, LID and source control BMPs is intended to reduce treatment requirements by preventing pollutants from entering storm water runoff and reducing runoff volumes and velocities. Treatment control BMPs would still be required for the Proposed Project. Specific proposed measures include detention/bioretention basins and vegetated swales as outlined below (refer to Attachments B and E in Appendix K for additional information on proposed treatment control BMP locations and specifications).

Bioretention facilities provide both surface and subsurface filtration, and exhibit high removal efficiencies for trash and debris, organic materials, and medium- to fine-grained sediments (along with attached pollutants such as nutrients, oil and grease, and metals). As previously described, three

detention/bioretention basins are proposed along the western boundary of the site on Lots E and F. These proposed basins encompass vegetation filter strips, sand and gravel beds, and a perforated underdrain pipeline system, and would treat runoff from most developed areas of the site including all residential lots except Lots 11 and 33 (as described below for vegetated swales), as well as associated areas such as roads and driveways (refer to Attachment B in Appendix K for plan and cross-section views of typical bioretention basins).

Based on Treatment Control (TC)-32 of the California Storm Water BMP Hand Book; bioretention removes stormwater pollutants through physical and biological processes, including adsorption, filtration, plant uptake, microbial activity, decomposition, sedimentation and volatilization (U.S. Environmental Protection Agency 1999). Adsorption is the process whereby particulate pollutants attach to soil (e.g., clay) or vegetation surfaces. Pollutants removed by adsorption include metals, phosphorus and hydrocarbons. Filtration occurs as runoff passes through the bioretention area media, such as the sand bed, groundcover and planting soil. Common particulates removed from stormwater include particulate organic matter, phosphorus and suspended solids. Biological processes that occur in wetlands result in pollutant uptake by plants and microorganisms in the soil. Plant growth is sustained by the uptake of nutrients from the soils, with woody plants locking up these nutrients through the seasons. Microbial activity within the soil also contributes to the removal of nitrogen and organic matter. Nitrogen is removed by nitrifying and denitrifying bacteria, while aerobic bacteria are responsible for the decomposition of the organic matter. Microbial processes require oxygen and can result in depleted oxygen levels if the bioretention area is not adequately aerated. Sedimentation occurs in the swale or ponding area as the velocity slows and solids fall out of suspension.

The removal effectiveness of bioretention has been studied during field and laboratory studies conducted by the University of Maryland (Davis et al. 1998). During these experiments, synthetic stormwater runoff was pumped through several laboratory and field bioretention areas to simulate typical storm events in Prince George's County, Maryland. Based on studies by Davis et al. (1998) and PGDER (1993) [8], removal rates for heavy metals and nutrients are shown below.

Pollutant	Removal Rate
Total Phosphorus	70-83%
Metals (Cu, Zn, Pb)	93-98%
TKN 68-80%	68-80%
Total Suspended Solids	90%
Organics	90%
Bacteria	90%

Results for both the laboratory and field experiments were similar for each of the pollutants analyzed. Doubling or halving the influent pollutant levels had little effect on the effluent pollutants concentrations

[8] References and sources of additional information on these points includes: Coffman, L.S., R. Goo and R. Frederick, 1999: Low impact development: an innovative alternative approach to stormwater management. Proceedings of the 26th Annual Water Resources Planning and Management Conference ASCE, June 6-9, Tempe, Arizona; Davis, A.P., Shokouhian, M., Sharma, H. and Minami, C., "Laboratory Study of Biological Retention (Bioretention) for Urban Stormwater Management," Water Environ. Res., 73(1), 5-14(2001); Davis, A.P., Shokouhian, M., Sharma, H., Minami, C., and Winogradoff, D. "Water Quality Improvement through Bioretention: Lead, Copper, and Zinc," Water Environ. Res., accepted for publication, August 2002; Kim, H., Seagren, E.A., and Davis, A.P., "Engineered Bioretention for Removal of Nitrate from Stormwater Runoff," WEFTEC 2000 Conference Proceedings on CDROM Research Symposium, Nitrogen Removal, Session 19, Anaheim CA, October 2000; Hsieh, C.-h. and Davis, A.P. "Engineering Bioretention for Treatment of Urban Stormwater Runoff," Watersheds 2002, Proceedings on CDROM Research Symposium, Session 15, Ft.Lauderdale, FL, Feb. 2002; Prince George's County Department of Environmental Resources (PGDER), 1993 Design Manual for Use of Bioretention in Stormwater Management, Division of Environmental Management, Watershed Protection Branch. Landover, MD; U.S. EPA Office of Water, 1999 Stormwater Technology Fact Sheet: Bioretention. EPA 832-F-99-012; and Weinstein, N. Davis, A.P. and Veeramachaneni, R. "Low Impact Development (LID) Stormwater Management Approach for the Control of Diffuse Pollution from Urban Roadways," 5th International Conference Diffuse/Nonpoint Pollution and Watershed Management Proceedings, C.S. Melching and Emre Alp, Eds. 2001 International Water Association.

(Davis et al. 1998). The microbial activity and plant uptake occurring in the bioretention area would likely result in higher removal rates than those determined for infiltration BMPs.

Vegetated swales provide filtration and infiltration as flows pass through and (to a lesser extent) percolate into the vegetated channel, and exhibit a medium removal efficiency for contaminants including sediment, heavy metals, and oil and grease. These facilities typically include design criteria such as shallow depths and grades to limit velocities and avoid erosion/scour, a high length to width ratio to increase treatment time and efficiency, and use of appropriate vegetation species such as non-invasive grasses that are tolerant of local climate/hydrologic conditions. Vegetated swales would be used to convey/filter runoff from Lots 11 and 33 along the southeastern portion of the proposed development area (refer to Attachment B in Appendix K for swale locations). The identified treatment control BMPs would help to improve long-term water quality within and downstream of the Project site and ensure conformance with applicable regulatory requirements by treating/removing contaminants from urban runoff to the MEP prior to downstream discharge.

Post-construction BMP Monitoring/Maintenance Schedules and Responsibilities. Identified BMPs include physical facilities such as "no dumping" stencils/tiles, detention/bioretention basins and vegetated swales, as well as programs/activities including landscape/irrigation management. All Project-related BMPs would be located/implemented on site or within applicable off-site facility areas, and are identified for Category 2 maintenance in the Project SWMP (refer to Attachment F in Appendix K). Accordingly, all associated monitoring and maintenance efforts would be the responsibility of the Project Applicant (or an associated entity such as a Homeowners' Association [HOA]), and would be implemented through establishment of (or inclusion within) a Maintenance Assessment District pursuant to requirements in Chapter 5, Section 5.2, of the County SUSMP. Specific Project monitoring and maintenance efforts associated with applicable proposed BMP facilities and programs are summarized in Table 3.1.4-7 (with additional information provided in Attachments E and F in Appendix K).

Based on the described implementation, monitoring and maintenance of BMPs in conformance with County Storm Water Standards and the related NPDES Municipal Storm Water Permit, the Proposed Project is expected to have a **less than significant** impact related to long-term generation of urban contaminants.

3.1.3.3 *Cumulative Impact Analysis*

The cumulative study area for hydrology/water quality impacts consists of the Buena HSA. As the HSA that contains the Proposed Project, this is the area that would be most directly affected by the Proposed Project's hydrology/water quality impacts, so represents a logical geographic unit for cumulative analysis. In addition to the Proposed Project, there are nine cumulative projects identified within the Buena HSA, as illustrated on Figure 3.1.3-2.

Development of these nine cumulative projects and the Proposed Project could potentially result in significant cumulative water quality impacts from effects such as increased erosion/sedimentation and the downstream transport of water-borne contaminants. This conclusion is alluded to in the San Diego County General Plan Conservation Element, which identifies ongoing water quality issues related to development and recognizes the fact that no comprehensive regional water quality control program was in place at the time the General Plan was adopted. Such a program is now in place, however, in the form of the RWQCB NPDES Municipal Stormwater Permit and the related County Stormwater Ordinance/Manual and SUSMP. These requirements are intended to protect receiving water beneficial uses (as identified in the RWQCB Basin Plan) by implementing site-specific and watershed-based requirements to meet related water quality objectives on a regional scale.

Implementation of the Proposed Project would result in the generation of short- and long-term contaminants, and would contribute to cumulative water quality impacts in downstream waters including Buena and Hedionda creeks, Agua Hedionda Lagoon and the Pacific Ocean. As described in the preceding analysis, implementation of the Proposed Project would require conformance with a number of regulatory requirements related to hydrology and water quality, including applicable elements of the CWA, County storm water standards, NPDES, and RWQCB Basin Plan. Based on such conformance (including the design measures described above and in Section 1.2.2 (Table 1-1) and Chapter 7.0 of this EIR), all identified project-level hydrology and water quality impacts from the Proposed Project were identified as less than significant.

Because these described efforts would not (and cannot) completely eliminate the generation of contaminants, the Project would incrementally contribute to cumulative water quality impacts. The following considerations apply to an evaluation of whether the Project contribution to cumulative effects would be considerable. The Project and applicable past, current and future developments within the Project cumulative study area would be subject to the identified water quality standards, with these requirements implemented through the referenced NPDES Municipal Permit and the County Stormwater Ordinance/Manual and SUSMP. As outlined below, these requirements are specifically intended to limit urban runoff contaminants, conform to Basin Plan water quality objectives and beneficial uses, and address regional (i.e., cumulative) water quality impacts on a watershed-wide basis within the San Diego Basin.

The referenced NPDES Municipal Stormwater Permit and related County standards identify waste discharge requirements for urban runoff related to applicable new development, redevelopment and existing development sites under the jurisdiction of co-permittees (e.g., the County of San Diego). The intent of these requirements is to protect environmentally sensitive areas and provide conformance with applicable water quality standards, including the federal CWA and the RWQCB Basin Plan beneficial uses and water quality objectives. To this end, the Municipal Permit requires co-permittees to fund and implement jurisdictional and watershed based URMPs that would reduce runoff and contaminant discharges to the MEP, with the goal of "[p]romoting attainment of water quality objectives necessary to support designated beneficial uses." Specific measures identified to meet these goals include (among other criteria) a number of numeric and qualitative standards related to water quality and runoff discharge. In addition to these site-specific elements, the noted regulatory requirements recognize both the regional nature of contaminant generation and the contribution of existing development to cumulative water quality effects. With respect to the first point, the Municipal Permit identifies the fact that "[u]rban runoff does not recognize political boundaries…," and that "[w]atershed-based land use planning (pursued collaboratively by neighboring local governments) can greatly enhance the protection of shared natural water resources." Specific measures identified to address these concerns include:

- Collaboration between individual co-permittees is required to establish URMPs for specific watersheds that extend across jurisdictional boundaries, and to (among other tasks) compile associated data bases (including mapping); assess receiving water quality; identify, prioritize, and monitor water quality problems; generate proposed mitigation efforts and responsibilities (including the assessment of long-term effectiveness); and document the described efforts in annual reports to the RWQCB. The described tasks were conducted on a jurisdictional basis for the first two years, and were expanded to include a watershed-based approach for subsequent efforts. This requirement has been implemented for the Project site watershed through adoption of the current Carlsbad WURMP (City of Carlsbad et al. 2008).
- Co-permittees are required to designate one or more lead permittees to coordinate the above described activities among the co-permittees; coordinate the preparation of a regional "Unified Jurisdictional URMP Document" (including assessment, monitoring, and reporting efforts similar to those described above); coordinate WURMP preparation/implementation; and serve as a

liaison to the RWQCB. The City of Carlsbad has been designated as the lead permittee for the Carlsbad WURMP.

- Co-permittees are required to assess and (if applicable) modify general plan, environmental review, and development approval processes to reflect the Municipal Permit requirements, including the noted watershed-based assessment of water quality issues. This requirement has been met through the referenced County Stormwater Ordinance/Manual and SUSMP; as well as the Carlsbad WURMP.
- Co-permittees are required to implement education programs to ensure that planning, development review, and other applicable staff members, as well as Project applicants (and other applicable non-regulatory personnel), adequately understand water quality laws and regulations, the connection between land use decisions/development and water quality impacts, and the methodology for reducing such impacts. This requirement has been met through the County Stormwater Ordinance/Manual; SUSMP; and LID Manual.

The Municipal Permit also identifies the contribution of existing development to cumulative water quality issues, and requires co-permittees to implement the following measures to assess and reduce cumulative impacts:

- Co-permittees are required to include and implement Existing Development components in their URMPs for existing municipal, residential, commercial and industrial sites, to "[m]inimize the short and long-term impacts on receiving water quality from all types of existing development." Specific methods identified to achieve this requirement include efforts such as contaminant source control and implementation of retrofit BMPs. This requirement has been met through the previously referenced Carlsbad WURMP; and County Stormwater Ordinance/Manual; SUSMP; and LID Manual.

- Co-permittees are required to implement URMP Components to actively seek and eliminate illicit discharges and connections to municipal stormdrains, including efforts to monitor, detect and eliminate such conditions, as well as measures to provide alternative disposal options (e.g., hazardous material collection sites/events) and enforcement capacity. This requirement has been met through the referenced Carlsbad WURMP, and County Stormwater Ordinance/Manual, and SUSMP.

With all of these considerations taken into account, **cumulative impacts related to hydrology/water quality would be less than significant.**

3.1.3.4 *Significance of Impacts Prior to Mitigation*

Identified potential hydrology/water quality impacts associated with the Proposed Project would be less than significant prior to mitigation, based on the implementation of identified proposed design measures and conformance with applicable regulatory requirements.

3.1.3.5 *Mitigation*

Because no significant impacts were identified, mitigation is not required.

3.1.3.6 *Conclusion*

Based on the discussions provided above, potential project-specific and cumulative hydrology and water quality impacts associated with implementation of the Proposed Project would be effectively avoided or

reduced below identified significance thresholds through proposed design measures, implementation of recommendations provided in the Project Hydrology Report and SWMP (Appendices J and K, respectively), and conformance with established regulatory requirements.

3.1.4 Land Use and Planning

This section addresses the Proposed Project's compatibility with existing land use and adopted land use planning documents. In some instances, land use compatibility issues are evaluated in other chapters of the EIR. This occurs for such topics as aesthetics, biological resources, noise, hydrology and water quality, and geology and soils. Where appropriate, these analyses are cross-referenced within this section.

3.1.4.1 *Existing Conditions*

Relevant Land Use Plans, Policies and Ordinances

Plans, policies and ordinances that address land use and apply to the Proposed Project are contained in the current versions of the County General Plan and the NCM Subregional Plan, County Zoning Ordinance, County RPO, LPC and NCCP Program. These plans/ordinances, described below, variously address development at appropriate densities and in accordance with existing community plans, protection of steep slopes, conservation of sensitive habitats, provision of open space, regulation of lighting and protection against incompatible land uses. Applicable goals and policies of these plans/ordinances, and the Project's consistency with them, are listed in Table 3.1.4-1.

County of San Diego General Plan

The County General Plan (adopted January 3, 1979, amended April 17, 2002) designates planned land uses considered appropriate for each portion of the County. The Project site is subject to the EDA Regional Category and the (17) Estate Residential Land Use Designation of the General Plan Regional Land Use Element. Figure 3.1.4-1 shows the land use designation of the Project site and surrounding areas. The EDA category combines agricultural and low-density residential uses on parcel sizes of 2 to 20 acres or larger, depending on the slope criteria in the underlying community or subregional plan land use designations. The EDA and the (17) Estate Residential Land Use Designation allow "Clustering," which is defined as:

> "A development technique in which buildings or lots are grouped or "clustered," through an on-site transfer of density, rather than distributed evenly throughout the project site as in a conventional subdivision. It is intended that smaller lots shall be clustered on the more level areas in compensation for larger lots on the steeper slopes. The total number of building lots or dwelling units in a cluster development shall not exceed the number which is allowed by the applicable land use designation and zoning."

The EDA provides the following criteria for allowing clustering that are applicable to the Proposed Project:

- At least 40 percent of the project is in a permanent open space easement.
- No more than one dwelling unit, along with permitted accessory structures and uses, is permitted on any lot in a clustered development.
- The minimum parcel size of parcels served by sewers, or a package treatment plant, is one acre. However, where permitted by the applicable community or subregional plan, a minimum parcel size of one-half acre may be allowed provided the resultant development can be found to be

compatible with the surrounding area and does not exceed the overall density permitted by the existing land use designation and zoning. In areas where the predominant slope exceeds 25 percent grade, no lot shall be smaller than four acres. Compatibility shall be based on uses, housing types, lot sizes, and any other relevant factors.

- The project would not have a more significant environmental effect than would an equivalent non-clustered development.

North County Metropolitan Subregional Plan

The Project site is located in the NCM Subregion, which is comprised of many non-contiguous areas interspersed among the cities of Escondido, San Diego, San Marcos, Vista and Oceanside. The NCM Subregional Plan was adopted on January 3, 1979 (GPA 78-03) and amended on December 19, 1990 (GPA 90-04). The NCM Subregional Plan designates planned land uses in the subregion and supplements elements of the General Plan. Many land use issues applicable to the Project are addressed in policies contained in both the NCM Subregional Plan and several elements of the General Plan. NCM Subregional Plan policies would take precedence where the General Plan policies are not applicable or relevant.

Applicable goals and policies within the NCM Subregional Plan include protection of environmental resources, cooperative planning of unincorporated lands within each surrounding city's sphere of influence, and scenic highway corridors. The NCM Subregional Plan is silent regarding the allowance of 0.5-acre lots that have sewer service and can be found to be compatible with surrounding development (see third bullet item above).

County of San Diego Zoning Ordinance

The County Zoning Ordinance (effective February 1, 1972, amended March 4, 1975) identifies the permitted uses on the Project site, consistent with the land use designations in the General Plan. The Project site is zoned A70, Limited Agriculture, with a two-acre minimum lot size and a maximum density of 0.5 dwelling units per acre (Figure 3.1.4-2). The A70 zone is intended to create and preserve areas primarily for agricultural crop production. Permitted uses include Family Residential, Essential Services, Fire Protection Service, Horticulture, Tree Crops, Row and Field Crops, Packaging and Processing: Limited and Wholesale Limited Winery.

County of San Diego Subdivision Ordinance

The Subdivision Ordinance is contained within Title 8, Division 1 of the San Diego Code of Regulatory Ordinances and sets forth development standards for the subdivision of land with respect to design, dedication and access, and required improvements. Applicable standards for the Proposed Project are contained in Section 81.401 and include several design regulations associated with lot size, orientation, and configuration. The Project is subject to the provisions within this ordinance.

County of San Diego Resource Protection Ordinance

The RPO (adopted on October 10, 1991 and amended on March 21, 2007) provides development controls with the intent of increasing the preservation and protection of the County's unique topography, natural beauty, diversity and natural resources and a high quality of life for current and future residents of San Diego County. Specifically, the RPO protects the County's steep slopes, sensitive habitat lands, wetlands, wetland buffers, floodways, floodplain fringe, and significant prehistoric and historic sites to prevent their degradation and loss by requiring certain discretionary projects to conduct a Resource Protection Study. The ordinance also preserves the ability of affected property owners to make reasonable use of their land subject to the conditions established by the RPO. The RPO requires that prior

to approval of a Tentative Map or a Rezone (among other discretionary applications), a Resource Protection Study must be completed and findings must be made relative to compliance with the provisions of the RPO.

Steep Slope Lands

The RPO defines steep slope lands as "all lands having a slope with natural gradient of 25 percent or greater and a minimum rise of 50 feet, unless said land has been substantially disturbed by previous legal grading. The minimum rise shall be measured vertically from the toe of slope to the top of slope within the Project site boundary."

The Project site is situated among a group of hills south of Buena Creek. The western portion of the property is relatively flat, while segments of the northern and eastern portions of the site consist of steep slopes or ridges. Elevations within the Project site range from approximately 565 to 1,050 feet amsl.

Sensitive Habitat Lands

Sensitive habitat lands are defined in the RPO as "land which supports unique vegetation communities, or the habitats of rare or endangered species or subspecies of animals or plants as defined in Section 15380 of the State CEQA Guidelines."

The Project site contains 1.0 acre of high sensitivity habitat (coast live oak woodland), 94.4 acres of moderate sensitivity habitat (Diegan coastal sage scrub [including disturbed], coastal sage-chaparral scrub and coyote brush scrub) and 13.5 acres of low sensitivity habitat (non-native grassland).

Wetlands

Wetlands are considered sensitive biological resources because they have been dramatically reduced in San Diego County and across the nation. Due to the regional and national loss of wetland habitats, resource agencies have implemented a "no net loss" policy. Wetland habitats are important because they support high levels of food, nutrients and high wildlife diversity, and are a valuable water source for wildlife in the arid climate of southern California.

No RPO wetlands are located within the Project site. Buena Creek and an associated patch of freshwater marsh located off site along Cleveland Trail are considered County RPO wetlands.

Wetland Buffers

Wetland buffers are defined by RPO as "lands which provide a buffer area of an appropriate size to protect the environmental and functional habitat values of the wetland, or which are integrally important in supporting the full range of the wetland and adjacent upland biological community."

No RPO wetland buffers are located within the Project site; however, such buffers associated with Buena Creek are located along Cleveland Trail.

Floodways

According to RPO regulation, "the development of permanent structures for human habitation or as a place of work shall not be permitted in a floodway." A floodway is defined in the RPO as land that meets the following criterion, as determined by the Director of the Department of Public Works:

a. The floodway shall include all areas necessary to pass the 100-year flood without increasing the water surface elevation more than 1 foot.

b. The floodway shall include all land necessary to convey a 10-year flood without structural improvements.

c. To avoid creating erosion and the need for channelization, rip-rap, or concrete lining, the floodway will not be further reduced in width when the velocity at the floodway boundary is six feet per second or greater.

d. Floodways are determined by removing equal conveyance from each side unless another criterion controls.

No floodways occur within the Project site. Cleveland Trail crosses the floodway associated with Buena Creek.

Floodplain Fringe

The RPO defines floodplain fringe as the area within the floodplain that is not in the floodway. It is generally associated with standing water during a flood event as opposed to rapidly flowing water.

A portion of the northwestern-most corner of the Project site extends within the 100-year and 500-year floodplains associated with Buena Creek. Cleveland Trail crosses the floodplain fringe associated with Buena Creek.

Significant Prehistoric or Historic Sites

Prehistoric or historic sites are defined by the RPO as "sites that provide information regarding important scientific research questions about prehistoric or historic activities that have scientific, religious or other ethnic value of local, regional, State or federal importance."

No prehistoric or historic sites are located within the Project development footprint; therefore, no known RPO-protected sites are located within the Project site.

County Light Pollution Code

The LPC is a County Regulatory Ordinance (Division 9, Section 59.101 through 59.115) that restricts the use of any outdoor lighting that emits undesirable light rays into the night sky. Although the primary intent of the code is to curb lighting that may affect astronomical research at the Mount Palomar and Mount Laguna observatories, it also contains language to minimize spill light into adjacent neighborhoods. The LPC defines two zones in the unincorporated portion of San Diego County. Zone A consists of areas within a 15-mile radius of Mount Laguna and Mount Palomar. Zone B pertains to all areas that are not defined as Zone A. The Project site is located within Zone B.

Natural Community Conservation Planning Program

Regional conservation planning strategies under the California ESA are authorized and implemented under the NCCP Act of 1991. These strategies are designed to provide protection, preservation and conservation of listed or candidate threatened and endangered species, as well as associated habitats and other environmental communities/resources, while continuing to allow appropriate development and economic growth within the state. Under this program, the USFWS, CDFG and other stakeholders have evaluated, or are evaluating, the distribution and extent of sensitive habitats and target sensitive plant and animal species in California. The ultimate goal of these studies is to develop interconnected ecosystem open space, based on multi-species, habitat-based and long-term approaches that ensure both the conservation of, and net benefits to, the affected species.

The County adopted the MSCP on March 18, 1997 (County 1997) to meet the requirements of the NCCP Act of 1991 and the federal and California ESAs. The Proposed Project, however, does not fall within the limits of the adopted MSCP. Thus, conformance with the adopted MSCP is not required. Instead, the Project would be subject to the requirements of the NCCP and Section 4(d) of the federal ESA for take of Diegan coastal sage scrub. Pursuant to Section 4(d) of the federal ESA, impacts to Diegan coastal sage scrub are limited to five percent of the total acreage occurring within the County as of 1994, and require an HLP pursuant to Habitat Loss Ordinance 8365.

3.1.4.2 *Analysis of Project Effects and Determination as to Significance*

Guideline for the Determination of Significance

A significant land use impact would occur if the project would:

1. Conflict with any applicable land use plan, policy or regulation of an agency with jurisdction over the project, adoped for the purpose of avoiding or mitigating an environmental effect.

The land use guideline is based on Appendix G of the CEQA Guidelines. Guideline No. 1 is intended to ensure conformance with existing regional and local planning efforts.

Analysis

The following discussion evaluates consistency with the NCM Subregional Plan, County General Plan, Zoning Ordinance, RPO, LPC and NCCP Program. Table 3.1.4-1 contains a complete listing of applicable land use plan designations, goals, objectives and policies for the Proposed Project as an analysis of the Project's consistency with them.

County General Plan and NCM Subregional Plan

As stated above, the Project site is subject to the EDA Regional Category and the (17) Estate Residential Land Use Designation. Based on current land use regulation including consideration of slope, the maximum number of dwelling units permitted on the Project site is 47.

The EDA land use category allows a minimum lot size of 0.5 acre in clustered developments if several criteria as stated above can be met; however, the NCM Subregional Plan is silent regarding allowance of 0.5-acre lot sizes associated with clustering of projects. Therefore, the proposed GPA would add the following text to the NCM Subregional Plan to guide development of the Sugarbush Specific Plan Area:

SUGARBUSH SPECIFIC PLANNING AREA (SPA .39)

The Sugarbush SPA consists of 115.5 acres located off of Buena Creek Road in North San Diego County between the cities of San Marcos and Vista. The Project shall be developed according to the following criteria:

1. Overall density shall not exceed 0.39 dwelling unit per acre.
2. Lots are to be a minimum of 0.5 acre in size.
3. No more than 45 residential lots are permitted.
4. Portions of the site which are generally in excess of 25 percent slope, particularly in the northern and easterly portions of the site, shall be preserved in permanent open space.

5. Impacts on Diegan coastal sage scrub shall be minimized by establishing a 500-foot buffer from the property's easterly boundary.

The addition of this language would designate the Sugarbush Specific Planning Area and allow for 0.5-acre lots in the proposed clustered development; however, the Project must also meet that part of these particular criteria, be found to be compatible with the surrounding area, and not exceed the overall density permitted by the existing land use designation and zoning. The Project does not exceed the overall density currently permitted as the Project proposes 45 residential lots compared to 47 that would be allowed.

The following discussion addresses compatibility of the Project with the surrounding area:

Although lot pads shown on the Tentative Map and Site Plan appear uniform, that does not necessarily mean that housing would reflect this uniform layout. The reasons for this are that the buildable portion (area and shape) of each lot varies based on the setbacks and future homes may be located anywhere inside that buildable portion of the lot. Only 8 of the proposed 45 residential lots would front seven existing lots in the Lone Oak Lane neighborhood to the west. The eight lots of the Project that would front the existing neighborhood range in size from 0.54 to 0.77 acre, and the residential structures on these lots would have a 100-foot backyard setback from the existing Lone Oak Lane neighborhood. The seven existing lots in the Lone Oak Lane neighborhood that border the Project site range in area from 0.59 to 2.24 acres and average 1.35 acres. Because of the required landscaping, and distance the proposed residences would be set back from the top of the proposed fill slope, residents in the Lone Oak Lane area would have limited views of the eight westernmost lots on the proposed development. In addition, the proposed S88 zoning for the Project site has the same minimum lot size (0.5 acre), animal regulations, building type, and allowable agricultural use types (horticulture, tree crops, and row and field crops) as the Rural Residential zoning of the adjacent Lone Oak Lane and Lone Oak Road neighborhood to the west. Building height would be 5 feet lower (30 feet total) in the proposed S88 zone than in the adjacent Lone Oak Lane neighborhood.

Analysis of other immediately surrounding neighborhoods revealed the following:

The 23 lots in the existing Sugarbush Drive neighborhood south of Buena Creek Road (assessors map 181-280) range from 1 to 2.33 acres and average 1.34 acres. Only 1 of the 23 lots in this neighborhood is over 2 acres (2.33 acres). Residential lots proposed by the Project are separated by approximately 900 feet of open space from the existing Sugarbush Drive neighborhood.

The 21 lots in the Highview Trail neighborhood adjacent to the southwest corner of the Project site (assessor's map 184-281) range in size from 0.53 to 2.47 acres, and average 0.87 acres. Only 1 of the 21 lots is over 2 acres (2.47 acres). This is similar to residential lot sizes in the proposed development which range from 0.5 to 1.73 acres with an average of 0.61 acre.

In addition, immediately southwest of the Lone Oak Lane/Lone Oak Road and Highview Trail neighborhoods (1/4 mile southwest of the Project site) is an area zoned for Mobile Home Residential Use. This area contains approximately 130 units on 31 acres, with an allowed density of 4.3 dwelling units per acre.

Architecture of the proposed homes has not specifically been evaluated at this planning stage of the development; however, the design theme utilized by the Project applicant in other developments is a semi-custom approach of three to four floor plans, using two to three architectural styles per floor plan and two to three color schemes per architectural style.

The Project meets the other applicable criteria for clustering as follows:

- *At least 40 percent of the project is in a permanent open space easement.* The Project complies with this requirement because it would place 67 percent of the overall Project acreage into open space.
- *No more than one dwelling unit, along with permitted accessory structures and uses, is permitted on any lot in a clustered development.* The Project complies with this requirement because the proposed Specific Plan limits the density on the Project site to 0.39 or 45 residential lots, the proposed Tentative Map creates 45 residential lots, and the zoning proposed for the site allows for a single detached dwelling unit per lot.
- *The project would not have a more significant environmental effect than would an equivalent non-clustered development.* The Project complies with this requirement because if clustering had not been proposed by the Project, significantly more steep slope areas would potentially have been impacted by development of larger lots in more visually prominent portions of the site, resulting in increased biological and visual impacts.

The Proposed Project would be consistent with all other applicable goals and policies in the General Plan, as documented in Table 3.1.4-1. Accordingly, following approval of the proposed amendment, associated **impacts would be less than significant**.

County Zoning Ordinance

As previously stated, the Project site is zoned A70, Limited Agriculture, which requires a two-acre minimum lot size and a maximum density of 0.5 dwelling unit per acre. The A70 zone is intended to create and preserve areas primarily for agricultural crop production.

As part of this Project, a rezone is proposed to change the zoning designation of the Project site from A70 to S88, Specific Planning Area, with a minimum lot size of 0.5 acre and a density of 0.39 dwelling unit per acre, to be consistent with the proposed GPA and Specific Plan applications.

The proposed zoning would change the maximum allowable height of structures (two stories) to 30 feet from 35 feet that is currently allowed.

The proposed zoning designation would change the setback designation to "V," (Variable). Variable setbacks are identified on the Project's Site Plan and allow variable front yard setbacks depending on the use of front- or side-loaded garages, and variable back yard setbacks to conform with the Project's FPP and provide adequate buffering for privacy to the existing Lone Oak Road/Lane community on the site's western boundary. The allowable setback distances under the existing zoning designation are 60 feet for the front yard from centerline of road, 15 feet for the interior side yard, 25 feet for the rear yard and 25 feet for the exterior side yard. According to the Site Plan for the Proposed Project, front yard setbacks would be 41 or 46 feet, depending on the use of side- or front-loaded garages, respectively. (A side-loaded garage would require the smaller setback.) Lots along the western boundary adjacent to the Lone Oak Lane neighborhood would require a 100-foot rear yard setback for increased privacy to the existing neighborhood. Lots along the eastern and southern edge of development adjacent to open space would require either 100- or 125-foot rear yard setback as specified by the approved FPP.

Animal regulations and building types under the proposed zoning designations would be the same as those of the adjacent Lone Oak Lane/Lone Oak Road neighborhood to the west.

Following approval of the proposed Rezone and Site Plan, potential inconsistency **impacts would be less than significant**.

County Resource Protection Ordinance

There is substantial topographic variation on the Project site, and approximately 36 percent of the site contains slopes steeper than 25 percent gradient. The Proposed Project has been designed to retain almost all on-site steep slopes (natural slopes with a gradient of over 25 percent slope and a height exceeding 50 feet) in open space. Two proposed residential lots (11 and 33) would contain RPO steep slopes; however, proposed encroachment would be 8.07 and 8.57 percent, respectively, neither of which is over the 10 percent encroachment allowed.

The Project site contains 1.0 acre of high sensitivity habitat (coast live oak woodland), of which 0.6 acre would be impacted. Impacts to this habitat would be mitigated at a 2.2:1 ratio (including creation), for a total preservation on site of 1.8 acres. No net loss of coast live oak woodland would occur due to Project development; in fact, the Project would result in a net gain following implementation of mitigation. Impacts also would occur to 0.02 acre of off-site southern coast live oak riparian forest, as described below. The Project site also contains 94.4 acres of moderate sensitivity habitat (Diegan coastal sage scrub [including disturbed], coastal sage-chaparral scrub and coyote brush scrub), of which ~~23.1~~23.4 acres (plus 0.2 acre off site) would be impacted. Impacts would be mitigated at a 2:1 ratio through preservation of ~~46.2~~47.4 acres of Diegan coastal sage scrub. Although not required, an additional ~~25.9~~23.3 acres of moderately sensitive habitat would be preserved within biological open space on site. In addition, the Project site contains 13.5 acres of low sensitivity habitat (non-native grassland), of which 11.1 acres would be impacted by development of oak woodland creation. A total of 5.6 acres of preservation is required (a 0.5:1 ratio) for mitigation, which would be accomplished through the preservation of the remaining on-site non-native grassland, as well as preservation of sage scrub habitat. Implementation would reduce impacts to sensitive habitats to less than significant levels.

As stated above, although no RPO wetlands are located on the Project site, an RPO wetland occurs along Cleveland Trail. Improvements proposed for this access road, however, would not result in impacts to any RPO wetlands. Similarly, water and sewer line installation across Buena Creek would occur within the existing roadbed, above the culvert, and therefore would not affect the creek.

No impacts to RPO wetland buffers are attributed to the Project. Cleveland Trail is an existing road that provides access to existing residences and does not constitute a new use adjacent to existing RPO wetland habitat. Installation of the proposed eight-inch sewer line approximately 30 feet from the freshwater marsh would not impact RPO wetland buffers because the segment that diverges from Cleveland Trail would occur using the jack-and-bore technique, which would not disturb the vegetation or affect the ground surface. Runoff would continue to enter the freshwater marsh without impediment or increased siltation. All other improvements in this area would occur within the existing disturbance footprint of Cleveland Trail, and thus would not constitute a new use adjacent to existing RPO wetland habitat. Best management practices would be employed during construction to minimize potential indirect impacts to the freshwater marsh and its buffer.

As stated above, the northwestern-most corner of the Project site is located within mapped 100- and 500-year floodplains associated with Buena Creek. This portion of the site is not within the proposed development area and would be preserved as permanent open space. Although Cleveland Trail crosses Buena Creek, the proposed off-site improvements to this roadway would be limited to resurfacing the existing roadway footprint, with no associated excavation, grading, alteration of existing drainage facilities, or placement of structures/facilities that would potentially obstruct flows and/or impact the extent or elevation of surface waters. No impacts would occur to the floodway.

Floodplain fringe would, however, be impacted by construction of improvements to Cleveland Trail. Such improvements would be allowable in the floodplain fringe because they would meet the following criteria: (1) no structures would be erected; (2) the roadway would be capable of withstanding periodic

flooding; and (3) improvements would not cause significant adverse water resource impacts or significantly increase downstream erosion.

The Project site and Cleveland Trail improvement areas do not contain any known RPO-significant prehistoric or historic sites. Monitoring during grading would ensure that no unknown impacts occur.

Accordingly, the Proposed Project would be in compliance with the RPO and associated **impacts would be less than significant**.

County of San Diego Subdivision Ordinance

The Proposed Project TM bas been reviewed by the County and determined to be in conformance with the development standards within the County Subdivision Ordinance. **No impact** is identified.

County Light Pollution Code

As stated above, the Project site is located within Zone B under the LPC. In compliance with these policies, all exterior lighting associated with the proposed homes would be directed and shielded. Therefore, Project lighting would be consistent with the LPC and associated impacts would be **less than significant**.

Natural Community Conservation Planning Program

The Project would be subject to the requirements of the NCCP and Section 4(d) of the federal ESA for take of Diegan coastal sage scrub. Findings in support of issuance of an HLP under Section 4(d) of the federal ESA would be required for the Project; however, an evaluation of the Project concluded that it would be infeasible to construct the Proposed Project without directly or indirectly impacting this habitat. For this reason, the HLP Ordinance would apply to the Proposed Project, and an HLP would be required. The Project would not preclude or prevent preparation of the subregional NCCP (in this case, the North County MSCP) nor would it reduce the likelihood of survival and recovery of a species in the wild. The Proposed Project would conform to the goals and requirements of the HLP Ordinance. Refer to Section 2.2.2.4 of Subchapter 2.2, Biological Resources, for additional details. Land use impacts related to program non-conformity would be **less than significant**.

3.1.4.3 *Cumulative Impact Analysis*

Significant cumulative land use and planning impacts may occur as a result of the combination of Project effects which, when examined individually, or in a vacuum without other projects considered, may not be identified as significant. The cumulative study area for land use impacts consisted of portions of the area shown on Figure 1-8 that were under County land use jurisdiction and west of I-15. This is because (1) other land use jurisdictions are likely to have different goals, objectives and policies with regard to land use; and (2) projects east of I-15 were considered too disconnected from the Project site to contribute to the same potential cumulative land use impacts. As noted in Table 3.1.4-2, two County projects (Nos. 35 and 79) within the cumulative study area, in addition to the Proposed Project, include GPAs, Specific Plans, Specific Plan Amendments and/or rezones. It is assumed that those projects not requiring any amendments or rezones would comply with applicable plans and ordinances and no inconsistency would result.

Construction of the two identified cumulative projects is anticipated to increase the urban intensity of the area. As shown on Table 3.1.4-2, for the Proposed Project and the other two identified cumulative projects, a total of approximately ~~2,459~~2,698 residences, as well as commercial uses, would be constructed. The publicly available analysis for Merriam Mountains (No. 35) indicates that the project

would be consistent with the General Plan and Community Plan goals, objectives and policies. Orchard Hills (No. 79) is still undergoing County review. It would involve a change in land use and zoning from a maximum of 1 dwelling unit per gross acre (depending upon slope) to 2.9 dwelling units per gross acre. The project site is located between the cities of Escondido and San Marcos, and has water and sewer lines adjacent to the site. Any associated land use impacts are anticipated to be extremely locally focused. Approval of the Project and the other two GPA and/or rezone projects under the jurisdiction of the County, in conjunction with their related amendments, generally would resolve any inconsistencies and achieve conformity with land use designations, goals and policies of the General Plan, Subregional/Community Plan and/or Zoning Ordinance. The projects therefore would not result in a significant cumulative impact.

As discussed above, the Project has been reviewed for conformance with applicable General Plan, NCM and other applicable plan goals and objectives as detailed in Table 3.1.4-1. Based on this, the Project (with its required plan amendments and rezone) would be consistent with all applicable land use and planning requirements. Furthermore, the Project would mitigate all identified impacts in conformance with approved plans and ordinances. Based on this, the Project would not significantly contribute to related cumulative impacts in association with the projects listed in Table 3.1.4-2. Therefore, the Project would **not result in a cumulatively considerable land use impact** related to document conformity/inconsistency.

3.1.4.4 *Significance of Impacts Prior to Mitigation*

Based on the discussions provided above in Subchapter 3.1.4.2, Project-related impacts associated with land use compatibility would be less than significant. In addition, cumulative land use impacts were determined to be less than significant.

3.1.4.5 *Mitigation*

Because no significant impacts were identified, mitigation would not be required.

3.1.4.6 *Conclusion*

Implementation of the Proposed Project would not result in significant impacts related to land use policy conformance, and no mitigation would be required. Potential inconsistencies with the existing General Plan and the Zoning designations are resolved through the Project GPA, Specific Plan, and Rezone applications.

Table 3.1.1-1
AMBIENT AIR QUALITY STANDARDS

Pollutant	Average Time	California Standards		National Standards		
		Concentration	Measurement Method	Primary	Secondary	Measurement Method
Ozone (O_3)	1 hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	--	--	Ethylene Chemiluminescence
	8 hour	0.070 ppm (137 µg/m^3)		0.075 ppm (147 µg/m^3)	0.075 ppm (147 µg/m^3)	
Carbon Monoxide (CO)	8 hours	9.0 ppm (10 mg/m^3)	Non-Dispersive Infrared Spectroscopy (NDIR)	9 ppm (10 mg/m^3)	None	Non-Dispersive Infrared Spectroscopy (NDIR)
	1 hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
Nitrogen Dioxide (NO_2)	Annual Average	0.030 ppm (56 µg/m^3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m^3)	0.053 ppm (100 µg/m^3)	Gas Phase Chemiluminescence
	1 hour	0.18 ppm (338 µg/m^3)		--	--	
Sulfur Dioxide (SO_2)	Annual Average	--	Ultraviolet Fluorescence	0.03 ppm (80 µg/m^3)	--	Pararosaniline
	24 hours	0.04 ppm (105 µg/m^3)		0.14 ppm (365 µg/m^3)	--	
	3 hours	--		--	0.5 ppm (1300 µg/m^3)	
	1 hour	0.25 ppm (655 µg/m^3)		--	--	
Respirable Particulate Matter (PM_{10})	24 hours	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	150 µg/m^3	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		--	--	
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	15 µg/m^3	15 µg/m^3	Inertial Separation and Gravimetric Analysis
	24 hours	--		35 µg/m^3	35 µg/m^3	
Sulfates	24 hours	25 µg/m^3	Ion Chromatography	--	--	--
Lead (Pb)	30-day Average	1.5 µg/m^3	Atomic Absorption	--	--	Atomic Absorption
	Calendar Quarter	--		1.5 µg/m^3	1.5 µg/m^3	
	3-month Rolling Average	--		0.15 µg/m^3	0.15 µg/m^3	
Hydrogen Sulfide (H_2S)	1 hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence	--	--	--
Vinyl Chloride	24 hours	0.010 ppm (26 µg/m^3)	Gas Chromatography	--	--	--

ppm= parts per million; µg/m^3 = micrograms per cubic meter; mg/m^3= milligrams per cubic meter
Source: Appendix H

Table 3.1.1-2
GLOBAL WARMING POTENTIALS AND ATMOSPHERIC LIFETIMES OF GHGS

GHG	Formula	100-Year Global Warming Potential	Atmospheric Lifetime (Years)
Carbon Dioxide	CO_2	1	Variable
Methane	CH_4	21	12 ± 3
Nitrous Oxide	N_2O	310	120
Sulfur Hexafluoride	SF_6	23,900	3,200

Source: Appendix I

Table 3.1.1-3

AMBIENT BACKGROUND CONCENTRATIONS
(PPM UNLESS OTHERWISE INDICATED)

Pollutant	Averaging Time	2006	2007	2008	Most Stringent Ambient Air Quality Standard	Monitoring Station
Ozone	8 hour	0.096	0.077	0.098	0.08	Escondido
	1 hour	0.108	0.094	0.116	0.09	Escondido
PM_{10}	Annual	24.1 µg/m^3	26.7 µg/m^3	24.7 µg/m^3	20 µg/m^3	Escondido
	24 hour	52 µg/m^3	68 µg/m^3	84 µg/m^3	50 µg/m^3	Escondido
$PM_{2.5}$	Annual	11.5 µg/m^3	13.3 µg/m^3	12.4 µg/m^3	12 µg/m^3	Escondido
	24 hour	40.6 µg/m^3	126.2 µg/m^3	44.0 µg/m^3	35 µg/m^3	Escondido
NO_2	Annual	0.017	0.016	0.018	0.030	Escondido
	1 hour	0.071	0.072	0.081	0.17	Escondido
CO	8 hour	3.61	3.19	2.81	9.0	Escondido
	1 hour	5.7	5.2	4.6	20	Escondido
SO_2	Annual	0.004	0.003	0.002	0.03	San Diego
	24 hour	0.009	0.006	0.007	0.04	San Diego
	3 hour	0.030	0.010	0.014	0.5[1]	San Diego
	1 hour	0.034	0.018	0.019	0.25	San Diego

[1]Secondary NAAQS
ppm= parts per million; µg/m^3 = micrograms per cubic meter; mg/m^3= milligrams per cubic meter
Source: Appendix H

Table 3.1.1-4
CONSTRUCTION EQUIPMENT

Construction Phase	Equipment	Number
Grading and Site Preparation	Scrapers	2
	Dozers	2
	Water truck	1
	Motor grader	1
	Loaders	1
	Compactor	1
Site Preparation/Site Utilities Overlap	Motor Grader	1
	Loaders	1
	Rubber Tire Compactor	1
	Trencher	1
	Scraper	1
	Water Trucks	1
Site Utilities/ Infrastructure Construction	Paddle scraper	1
	Blade	1
	Water truck	1
	Roller compactor	2
	Paver	1
	Rubber tire compactor	2
	Concrete/Rock trucks	1
	Asphalt truck	1
House Construction	Pettibone crane	1
	Concrete trucks	3
	Material trucks	4

Source: Appendix H

Table 3.1.1-5
ESTIMATED CONSTRUCTION EMISSIONS
WITH DUST CONTROL MEASURES

Emission Source	Control Efficiency	ROC	NO_x	CO	Oxides of Sulfur (SO_x)	PM_{10}	$PM_{2.5}$
lbs/day							
Grading and Site Preparation							
Fugitive Dust	51 percent	-	-	-	-	64.68	13.58
Heavy Equipment Exhaust		13.91	124.94	58.93	0.11	5.38	4.79
Construction Truck Trips		0.95	16.61	4.92	0.02	0.66	0.57
Worker Travel – Vehicle Emissions		0.29	0.56	6.02	0.01	0.07	0.04
TOTAL		**15.15**	**142.11**	**69.87**	**0.14**	**70.79**	**18.98**
Significance Criteria		75	250	550	250	100	55
Significant?		*No*	*No*	*No*	*No*	*No*	*No*

Table 3.1.1-5
ESTIMATED CONSTRUCTION EMISSIONS
WITH DUST CONTROL MEASURES (cont.)

Emission Source	Control Efficiency	ROC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
			lbs/day				
Site Utilities/House Construction							
Asphalt Offgassing		2.29		-	-	-	-
Heavy Equipment Exhaust		19.34	170.03	66.53	0.18	7.84	6.97
Construction Truck Trips		0.63	10.96	3.25	0.01	0.44	0.37
Worker Travel – Vehicle Emissions		3.25	6.28	67.72	0.10	0.80	0.44
TOTAL		**25.51**	**187.27**	**137.50**	**0.29**	**9.08**	**7.78**
Significance Criteria		75	250	550	250	100	55
Significant?		*No*	*No*	*No*	*No*	*No*	*No*

Source: Appendix I

Table 3.1.1-6
TRAFFIC EMISSIONS

	ROC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Lbs/day					
Vehicular Emissions	4.02	2.60	33.38	0.03	0.26	0.15
Significance Criteria	55	250	550	250	100	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
	Tons/year					
Vehicular Emissions	0.73	0.47	6.09	0.01	0.05	0.03
Significance Criteria	10	40	100	100	15	10
Significant?	*No*	*No*	*No*	*No*	*No*	*No*

Source: Appendix H

Table 3.1.1-7
TOTAL OPERATIONAL EMISSIONS

	ROC	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
	Lbs/day					
Residential Energy Use	0.00015	0.000862	0.0000077	Negligible	0.0000302	0.00003
Fireplace Wood Burning	1.42	0.0161	1.57	0.00248	0.215	0.217
Vehicular Emissions	4.02	2.60	33.38	0.03	0.26	0.15
TOTAL	**5.44**	**2.62**	**34.95**	**0.03**	**0.48**	**0.37**
Significance Criteria	55	250	550	250	100	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
	Tons/year					
Residential Energy Use	0.00000106	0.000157	0.0000273	Negligible	0.0000055	0.000006
Fireplace Wood Burning	0.260	0.00295	0.286	0.000453	0.00392	0.00380
Vehicular Emissions	0.73	0.47	6.09	0.01	0.05	0.03
TOTAL	**0.99**	**0.47**	**6.38**	**0.01**	**0.05**	**0.03**
Significance Criteria	10	40	100	100	15	10
Significant?	*No*	*No*	*No*	*No*	*No*	*No*

Source: Appendix H

Table 3.1.1-8
CO HOT SPOTS MODELING RESULTS

Intersection	**Maximum 1-hour CO Concentration plus Background, ppm (CAAQS = 20 ppm)**		**Maximum 8-hour CO Concentration plus Background, ppm (CAAQS = 9 ppm)**
	AM	*PM*	
Buena Creek Road/Monte Vista	-	6.5	4.17

Source: Appendix H

Table 3.1.1-9
SUMMARY OF ESTIMATED OPERATIONAL GREENHOUSE GAS EMISSIONS

Emission Source	Annual Emissions (Metric tons/year)		
	CO_2	CH_4	N_2O
Operational Emissions			
Electricity Use Emissions	212	0.0016	0.0009
Natural Gas Use Emissions	106	0.01	0.0002
Water Consumption Emissions	41	0.0003	0.0002
Vehicle Emissions	476	0.044	0.041
Total	835	0.056	0.042
Global Warming Potential Factor	**1**	**21**	**310**
CO_2 Equivalent Emissions	835	1	13
TOTAL CO_2 Equivalent Emissions	**849**		

Source: Appendix I

Table 3.1.2-1
PLANTS PROHIBITED WITHIN ANY FUEL MODIFICATION ZONE

Botanical Name	Common Name	Comment*
Trees		
Abies spp.	Fir	F
Acacia spp. *(numerous)*	Acacia	F, I
Agonis juniperina	Juniper Myrtle	F
Araucaria spp. *(A. heterophylla, A. araucana, A. bidwillii)*	Araucaria (Norfolk Island Pine, Monkey Puzzle Tree, Bunya Bunya)	F
Callistemon spp. *(C. citrinus, C. rosea, C. viminalis)*	Bottlebrush (Lemon, Rose, Weeping)	F
Calocedrus decurrens	Incense Cedar	F
Casuarina cunninghamiana	River She-Oak	F
Cedrus spp. *(C. atlantica, C. deodara)*	Cedar (Atlas, Deodar)	F
Chamaecyparis spp. *(numerous)*	False Cypress	F
Cinnamomum camphora	Camphor	F
Cryptomeria japonica	Japanese Cryptomeria	F
Cupressocyparis leylandii	Leyland Cypress	F
Cupressus spp. *(C. fobesii, C. glabra, C. sempervirens,)*	Cypress (Tecate, Arizona, Italian, others)	F
Eucalyptus spp. *(numerous)*	Eucalyptus	F, I
Juniperus spp. *(numerous)*	Juniper	F
Larix spp. *(L. decidua, L. occidentalis, L. kaempferi)*	Larch (European, Japanese, Western)	F
Leptospermum spp. *(L. laevigatum, L. petersonii)*	Tea Tree (Australian, Tea)	F
Lithocarpus densiflorus	Tan Oak	F

Table 3.1.2-1 (cont.)
PLANTS PROHIBITED WITHIN ANY FUEL MODIFICATION ZONE

Botanical Name	Common Name	Comment*
Trees (cont.)		
Melaleuca spp. *(M. linariifolia, M. nesophila, M. quinquenervia)*	Melaleuca (Flaxleaf, Pink, Cajeput Tree)	F, I
Olea europea	Olive	I
Picea (numerous)	Spruce	F
Palm spp. *(numerous)*	Palm	F, I
Pinus spp. *(P. brutia, P. canariensis, P. b. eldarica, P. halepensis, P. pinea, P. radiata, numerous others)*	Pine (Calabrian, Canary Island, Mondell, Aleppo, Italian Stone, Monterey)	F
Platycladus orientalis	Oriental Arborvitae	F
Podocarpus spp. *(P. gracilior, P. macrophyllus, P. latifolius)*	Fern Pine (Fern, Yew, Podocarpus)	F
Pseudotsuga menziesii	Douglas Fir	F
Schinus spp. *(S. molle, S. terebenthifolius)*	Pepper (California and Brazilian)	F, I
Tamarix spp. *(T. africana, T. aphylla, T. chinensis, T. parviflora)*	Tamarix (Tamarisk, Athel Tree, Salt Cedar, Tamarisk)	F, I
Taxodium spp. *(T. ascendens, T. distichum, T. mucronatum)*	Cypress (Pond, Bald, Monarch, Montezuma)	F
Taxus spp. *(T. baccata, T. brevifolia, T. cuspidata)*	Yew (English, Western, Japanese)	F
Thuja spp. *(T. occidentalis, T. plicata)*	Arborvitae/Red Cedar	F
Tsuga spp. *(T. heterophylla, T. mertensiana)*	Hemlock (Western, Mountain)	F
Groundcovers, Shrubs, and Vines		
Acacia spp.	Acacia	F, I
Adenostoma fasciculatum	Chamise	F
Adenostoma sparsifolium	Red Shanks	F
Agropyron repens	Quackgrass	F, I
Anthemis cotula	Mayweed	F, I
Arbutus menziesii	Madrone	F
Arctostaphylos spp.	Manzanita	F
Arundo donax	Giant Reed	F, I
Artemisia spp. *(A. abrotanium, A. absinthium, A. californica, A. caucasica, A. dracunculus, A. tridentata, A. pynocephala)*	Sagebrush (Southernwood, Wormwood, California, Silver, True tarragon, Big, Sandhill)	F
Atriplex spp. *(numerous)*	Saltbush	F, I
Avena fatua	Wild Oat	F
Baccharis pilularis	Coyote Bush	F
Bambusa spp.	Bamboo	F, I
Bougainvillea spp.	Bougainvillea	F, I

Table 3.1.2-1 (cont.)
PLANTS PROHIBITED WITHIN ANY FUEL MODIFICATION ZONE

Botanical Name	Common Name	Comment*
Groundcovers, Shrubs, and Vines (cont.)		
Brassica spp. *(B. campestris, B. nigra, B. rapa)*	Mustard (Field, Black, Yellow)	F, I
Bromus rubens	Foxtail, Red brome	F, I
Castanopsis chrysophylla	Giant Chinquapin	F
Cardaria draba	Hoary Cress	I
Carpobrotus spp.	Ice Plant, Hottentot Fig	I
Cirsium vulgare	Wild Artichoke	F,I
Conyza bonariensis	Horseweed	F
Coprosma pumila	Prostrate Coprosma	F
Cortaderia selloana	Pampas Grass	F, I
Cytisus scoparius	Scotch Broom	F, I
Dodonaea viscosa	Hopseed Bush	F
Eriodictyon californicum	Yerba Santa	F
Eriogonum spp. *(E. fasciculatum)*	Buckwheat (California)	F
Fremontodendron species	Flannel Bush	F
Hedera spp. *(H. canariensis, H. helix)*	Ivy (Algerian, English)	I
Heterotheca grandiflora	Telegraph Plant	F
Hordeum leporinum	Wild barley	F, I
Juniperus spp.	Juniper	F
Lactuca serriola	Prickly Lettuce	I
Larix spp. *(numerous)*	Larch	F
Larrea tridentata	Creosote bush	F
Lolium multiflorum	Ryegrass	F, I
Lonicera japonica	Japanese Honeysuckle	F
Mahonia spp.	Mahonia	F
Mimulus aurantiacus	Sticky Monkeyflower	F
Miscanthus spp.	Eulalie Grass	F
Muhlenbergia spp.	Deer Grass	F
Nicotiana spp. *(N. bigelovii, N. glauca)*	Tobacco (Indian, Tree)	F, I
Pennisetum setaceum	Fountain Grass	F, I
Perovskia atroplicifolia	Russian Sage	F
Phoradendron spp.	Mistletoe	F
Pickeringia montana	Chaparral Pea	F
Rhus spp. *(R. diversiloba, R. laurina, R. lentii)*	Sumac (Poison oak, Laurel, Pink Flowering)	F
Ricinus communis	Castor Bean	F, I
Rhus lentii	Pink Flowering Sumac	F
Rosmarinus spp.	Rosemary	F
Salvia spp. *(numerous)*	Sage	F, I
Salsola australis	Russian Thistle	F, I
Solanum xantii	Purple Nightshade (toxic)	I
Silybum marianum	Milk Thistle	F, I

Table 3.1.2-1 (cont.)
PLANTS PROHIBITED WITHIN ANY FUEL MODIFICATION ZONE

Botanical Name	Common Name	Comment*
Groundcovers, Shrubs, and Vines (cont.)		
Thuja spp.	Arborvitae	F
Urtica urens	Burning Nettle	F
Vinca major	Periwinkle	I

Source: Hunt 2009
*F = flammable, I = Invasive
NOTES:
1. Plants on this list that are considered invasive are a partial list of commonly found plants. There are many other plants considered invasive that should not be planted in a fuel modification zone and they can be found on the California Invasive Plant Council's website (www.cal-ipc.org/ip/inventory/index.php). Other plants not considered invasive at this time may be determined to be invasive after further study.
2. For the purpose of using this list as a guide in selecting plant material, it is stipulated that all plant material will burn under various conditions.
3. The absence of a particular plant, shrub, groundcover or tree from this list does not necessarily mean it is fire resistive.
4. All vegetation used in the fuel modification zones and elsewhere shall be subject to approval of the Fire Marshal.
5. Landscape architects may submit proposals for use of certain vegetation on a project-specific basis. They also shall submit justifications as to the fire resistivity of the proposed vegetation.

Table 3.1.2-2
CUMULATIVE PROJECTS WITHIN THE VFPD

No.	Project Name	Project Number	Jurisdiction	Status	Type of Project	Project Characteristics
1	Kirkorowicz TPM	TPM 20986	County of San Diego	P	RES	2 residential units
4	Biernacki TPM	TPM 20836	County of San Diego	A	RES	2 residential units
11	Cal-a-Vie	P82-072 WM	County of San Diego	A	COM	14,800 sq ft office, health spa, pool, morning room w/ rooftop deck, covered patio W1M4: Approved September 2006, added a 1200 square-foot meditation room to the project site. No impacts. W1M5: Approved April 2007, added 6 handicap parking spaces and handicap ramp to a parking lot. No impacts.
52	Vista Irrigation Pipeline Access	N/A	Vista Irrigation District	F	Utility	This project is a reasonably foreseeable future project. Vegetation (i.e., chaparral) has grown in the easements that contain the current cross-county pipelines. In order to access these lines, vegetation may have to be removed. Environmental review will be done in the future.
53	Plamondon TPM/Emma Estates	TPM 20469	County of San Diego	A	RES	Minor lot subdivision of 4.54 acres into three residential lots.
54	Via Conca D'Oro Residential	TM 5132	County of San Diego	UR	RES	Development of 6 residential lots within 6.6 acres of land.
62	Hannalei Elementary	N/A	Vista Unified School District	B	PF	The development of a school with student capacity of 750 students, within 11.23 acres.
63	Tai Estates	TM 5409	County of San Diego	P	RES	6 residential units and approximately 25 acres of open space on 46.87 acres
64	Leese Property	TPM 20384	County of San Diego	A	RES	3 residential lots on 8.3 acres
65	Kawano Subdivision	—	County of San Diego	UR	RES	Subdivide 10.27 acres into 8 residential lots.
66	Fredas Hill	TM 5308	County of San Diego	A	RES	Development of approximately 21.65 acres into 13 single-family residential lots.

A = Approved; B = Built; COM = Commercial; F = Future; P = Planned/Pending; PF = Public Facility; RES = Residential; UR = Under Review

Table 3.1.3-1
SUMMARY OF TYPICAL CONTAMINANT SOURCES
FOR URBAN STORM WATER RUNOFF

Contaminant	Contaminant Sources
Sediment and Trash/Debris	Streets, landscaping, driveways, parking areas, rooftops, construction, atmospheric deposition, drainage channel erosion
Pesticides and Herbicides	Landscaping, roadsides, utility right-of-ways, soil wash-off
Organic Compounds	Landscaping, streets/parking areas, animal wastes, recreation areas
Oxygen Demanding Substances	Landscaping, animal wastes, sanitary sewer lines, recreation areas
Heavy Metals	Automobiles, bridges, atmospheric deposition, industrial areas, soil erosion, corroding metal surfaces, combustion processes
Oil and Grease/Hydrocarbons	Roads, driveways, parking lots, vehicle maintenance areas, gas stations, illicit dumping to storm drains
Bacteria and Viruses	Landscaping, roads, sanitary sewer lines and cross-connections, animal wastes, recreation areas
Nutrients (Nitrogen and Phosphorus)	Rooftops, landscaping, atmospheric deposition, automobile exhaust, soil erosion, animal wastes, detergents, recreation areas

Source: USEPA 1999

Table 3.1.3-2
TYPICAL LOADINGS FOR SELECTED CONTAMINANTS IN RUNOFF
FROM VARIOUS LAND USES
(lbs/acre/year)

Land Use	TSS	TP	TKN	NH_3 - N	NO_2 + NO_3 - N	BOD	COD	Pb	Zn	Cu
Commercial	1000	1.5	6.7	1.9	3.1	62	420	2.7	2.1	0.4
Parking Lot	400	0.7	5.1	2	2.9	47	270	0.8	0.8	0.04
HDR	420	1	4.2	0.8	2	27	170	0.8	0.7	0.03
MDR	190	0.5	2.5	0.5	1.4	13	72	0.2	0.2	0.14
LDR	10	0.04	0.03	0.02	0.1	N/A	N/A	0.01	0.04	0.01
Freeway	880	0.9	7.9	1.5	4.2	N/A	N/A	4.5	2.1	0.37
Industrial	860	1.3	3.8	0.2	1.3	N/A	N/A	2.4	7.3	0.5
Park	3	0.03	1.5	N/A	0.3	N/A	2	0	N/A	N/A
Construction	6000	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

HDR = High Density Residential; MDR = Medium Density Residential; LDR = Low Density Residential
N/A = Not available; insufficient data to characterize
TSS = Total Suspended Solids; TP = Total Phosphorus; TKN = Total Kjeldahl Nitrogen; NH_3 – N = Ammonia - Nitrogen; NO_2 + NO_3 – N = Nitrite + Nitrate - Nitrogen; BOD = Biochemical Oxygen Demand; COD = Chemical Oxygen Demand; Pb = Lead; Zn = Zinc; Cu = Copper
Source: USEPA 1999

Table 3.1.3-3
SURFACE AND GROUNDWATER QUALITY OBJECTIVES FOR THE AGUA HEDIONDA HYDROLOGIC AREA[1]

SURFACE WATER												
Constituent (mg/l or as noted)												
TDS	**Cl**	**SO_4**	**% Na**	**N&P**	**Fe**	**Mn**	**MBAS**	**B**	**Odor**	**Turb NTU**	**Color Units**	**F**
500	250	250	60	--[2]	0.3	0.05	0.5	0.75	None	20	20	1.0
GROUNDWATER												
Constituent (mg/l or as noted)												
TDS	**Cl**	**SO_4**	**% Na**	**NO_3**	**Fe**	**Mn**	**MBAS**	**B**	**Odor**	**Turb NTU**	**Color Units**	**F**
1,200	500	500	60	10	0.3	0.05	0.5	0.75	None	5	15	1.0

[1] Concentrations not to be exceeded more than 10% of the time during any one-year period; refer to Figure 3.1.3-1 for local hydrologic designation locations.

[2] Shall be maintained at levels below those that stimulate algae and emergent plant growth.

Abbreviation Key: TDS = Total Dissolved Solids; Cl = Chlorides; SO_4 = Sulfate; Na = Sodium; N&P = Nitrogen and Phosphorus; NO_3 = Nitrate; Fe = Iron; Mn = Manganese; MBAS = Methylene Blue Activated Substances (e.g., commercial detergent); B = Boron; Turb = Turbidity (measured in Nephelometric Turbidity Units [NTU]); F = Fluoride.

Source: RWQCB 1994 as amended

Table 3.1.3-4
POTENTIAL MEASURES TO AVOID OR MINIMIZE IMPACTS RELATED TO EROSION AND SEDIMENTATION

- Comply with seasonal grading restrictions during the rainy season (October 1 to April 30) for applicable locations/conditions.
- Prepare and implement a "weather triggered" action plan for construction activities conducted during the rainy season to provide enhanced erosion and sediment control measures prior to predicted storm events (i.e., 40 percent or greater chance of rain).
- Use phased grading schedules to limit the area subject to erosion at any given time.
- Use erosion control/stabilizing measures such as geotextiles, mats, fiber rolls, soil binders or temporary hydroseeding (or other plantings) in appropriate areas (e.g., disturbed areas and graded slopes) established prior to October 1.
- Use sediment controls to protect the construction site perimeter and prevent off-site sediment transport, including measures such as temporary inlet filters, silt fence, fiber rolls, gravel bags, temporary sediment basins, check dams, street sweeping/vacuuming, energy dissipators, stabilized construction access points/sediment stockpiles and properly fitted covers for sediment transport vehicles.
- Store BMP materials in applicable on-site areas to provide "standby" capacity adequate to provide complete protection of exposed areas and prevent off-site sediment transport.
- Provide appropriate training for personnel responsible for BMP installation and maintenance.
- Use solid waste management efforts such as street sweeping and proper containment and disposal of construction debris.
- Comply with local dust control requirements.
- Install permanent landscaping, with emphasis on native and/or drought-tolerant varieties, as soon as feasible during or after construction.
- Implement appropriate monitoring and maintenance efforts (e.g., prior to and after storm events) to ensure proper BMP function and efficiency.
- Implement sampling/analysis, monitoring/reporting and post-construction management programs per NPDES and/or County requirements.
- Use sediment control devices downstream of paving activities.
- Implement additional BMPs as necessary to ensure adequate erosion and sediment control.

Table 3.1.3-5
POTENTIAL MEASURES TO AVOID OR MINIMIZE IMPACTS RELATED TO THE USE AND DISCHARGE OF CONSTRUCTION-RELATED HAZARDOUS MATERIALS

- Minimize the amount of hazardous materials used and stored on-site, and restrict storage/use locations to areas at least 50 feet from storm drains and surface waters.
- Use raised (e.g., on pallets), covered and/or enclosed storage facilities for all hazardous materials.
- Maintain accurate and up-to-date written inventories and labels for all stored hazardous materials.
- Use berms, ditches and/or impervious liners (or other applicable methods) in material storage and vehicle/equipment maintenance and fueling areas to provide a containment volume of 1.5 times the volume of stored/used materials and prevent discharge in the event of a spill.
- Place warning signs in areas of hazardous material use or storage and along drainages and storm drains (or other appropriate locations) to avoid inadvertent hazardous material disposal.
- Restrict paving operations during wet weather, and use sediment control devices downstream of paving activities.
- Properly contain and dispose of paving wastes and slurry (e.g., by using properly designed and contained concrete washout areas).
- Properly maintain all construction equipment and vehicles.
- Provide training for applicable employees in the proper use, handling and disposal of hazardous materials, as well as appropriate action to take in the event of a spill.
- Store absorbent and clean-up materials in appropriate on-site locations where they are readily accessible.
- Properly locate, contain and maintain on-site trash and wastewater facilities.
- Use recycled or less hazardous materials wherever feasible.
- Post regulatory agency telephone numbers and a summary guide of clean-up procedures in a conspicuous location at or near the job site trailer.
- Regularly (at least weekly) monitor and maintain hazardous material use/storage facilities and operations to ensure proper working order.
- Implement a SWSAS program pursuant to regulatory guidelines.
- Use appropriate storage facilities for construction debris, including adequately sized watertight dumpsters, covers to preclude rain from contacting waste materials, impervious liners, and surface containment features such as berms, dikes or ditches to prevent runon and runoff.
- Employ a licensed waste disposal operator to regularly (at least once a week) remove and dispose of construction debris at an authorized off-site location.

Table 3.1.3-6
SUMMARY OF TYPICAL/PROPOSED POST-CONSTRUCTION BMP MONITORING AND MAINTENANCE EFFORTS

- Inlet Stenciling/Tiles: Monitoring and maintenance for informational storm drain inlet stencils and tiles would include annual inspections prior to the rainy season. Specific maintenance efforts would include clearing inlets of all trash and debris during each inspection, and replacing stencils/tiles as necessary to maintain legibility.

- Landscaping and Related Irrigation Systems: Project landscaping and associated irrigation systems would be regularly maintained by the HOA, with specific activities including regular weeding and vegetation replacement in landscaped areas, as well as inspection and as-needed adjustment/repair of irrigation systems and schedules.

- Detention/Bioretention Basins: Monitoring and maintenance activities for the proposed basins would include: (1) regular inspections, including once during the wet season and once during the dry season for basin slopes, sediment/trash and animal burrows, and after each target rainfall event (0.75 inch or more); (2) removal of trash and debris during each inspection; (3) removal of excess sediment during each inspection, specifically if sediment reaches the marked staff gauge level; (4) vegetation management (e.g., mowing, trimming, tree/woody shrub removal and/or reseeding); (5) implementation of erosion control measures (e.g., erosion blankets) if applicable; (6) removal of standing water; and (7) conducting repairs or other maintenance as required to maintain proper function.

- Vegetated Swales: Monitoring and maintenance activities for vegetated swales for would include: (1) regular inspections (a minimum of once during the wet season and once during the dry season) to ensure proper function and conduct scheduled maintenance; (2) removal of trash and debris during each inspection; (3) removal of excess sediment during each inspection, specifically if sediment reaches a level that could interfere with facility flow or operation; (4) removal of standing water; (5) vegetation management (e.g., mowing, trimming and/or reseeding), fertilization and irrigation as required to maintain vegetation and ensure proper function; (6) elimination of mosquito breeding habitats and control of other animal/vector issues (e.g., animal burrows); and (7) conducting repairs or other maintenance as required to maintain proper function.

Table 3.1.4-1
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
North County Metropolitan Subregional Plan		
GOALS 1. Accommodate urban development in appropriate areas. Accommodate a population of 430,800 persons in the subregion (including cities) by 1995, if essential services such as water, sewer, fire protection and schools can be made available.	The Proposed Project would implement the stated intent to develop compatible residential units where existing infrastructure is in place to maximize efficient use of public facilities and services. Refer to policies within the Public Facility Element of the County General Plan, below, for discussions regarding accommodations of essential services. The Project would construct homes compatible in lot size and nature with surrounding properties.	Yes
4. Protect environmental resources. Protect natural and economic resources by designating appropriate lands as rural, estate and environmentally constrained areas.	The Project site is designated as (17) Estate Residential. The Proposed Project has been designed to avoid impacts to steep slopes. The Project would incorporate a clustered residential design to minimize the removal of native vegetation and would preserve five sensitive vegetation communities, including coast live oak woodland, Diegan coastal sage scrub, coastal sage-chaparral scrub, coyote brush scrub and non-native grassland. The Project also would preserve 0.1 acre of eucalyptus woodland on site. These plant communities provide habitat for some sensitive animals, including coastal California gnatcatcher and raptors. The on-site dedicated biological open space would include the majority of the Project site (75.7 acres [66 percent]). In addition to habitat preservation, as part of mitigation for oak woodland impacts, approximately 0.9 acre of coast live oak woodland creation would occur within on-site biological open space. Refer to Subchapter 2.2, Biological Resources, for additional details.	Yes

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
North County Metropolitan Subregional Plan (cont.)		
POLICIES **Land Use** 1. Increase City-County planning cooperation. The County will cooperate in planning and regulating growth of unincorporated territory within each City's sphere of influence. Future County decisions on proposed projects in the sphere areas will take each City's planning objectives into consideration.	The Project site is located near the cities of Vista and San Marcos. Only the westernmost portion of the Project site (where no residential development is proposed), as well as Cleveland Trail, is within the sphere of influence of the City of Vista. No residential development is proposed in either jurisdiction's Sphere of Influence. Some traffic mitigation improvements are proposed to occur within the City of San Marcos. Coordination has occurred, and the City has been instrumental in identifying appropriate mitigation.	Yes
Avocational Agriculture 13. Recognize that avocational agriculture is a compatible secondary use of land throughout the subregion.	The proposed zoning reclassification to S88 (Specific Planning Area) allows for the following agricultural use types: Horticulture (all types), Tree Crops, Row and Field Crops, and Packing and Processing: Limited.	
Scenic Highways 18. Assign scenic highway priorities. The objective of a Scenic Highway Program is to protect and enhance the County's scenic, historic, and recreational resources within a network of scenic highway corridors. Assign, among other County roadways, Twin Oaks Valley Road as a Third Priority scenic highway corridor.	Twin Oaks Valley Road from Gopher Canyon Road to the San Marcos city limits is designated as a Third Priority Scenic Route in the Scenic Highway Element of the County General Plan. The proposed development area is located approximately two miles southwest of this segment of roadway, but is not visible from the roadway due to intervening topography and vegetation.	Yes

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego General Plan – Open Space Element		
Open Space Design of Private Lands **Objectives of Goal I - Health and Safety** 1. Control development on steep slopes to minimize slide danger, erosion, silting and fire hazard.	The Proposed Project has been designed to retain almost all on-site steep slopes (natural slopes with a gradient of over 25 percent slope and a height exceeding 50 feet) in open space. Two proposed residential lots (11 and 33) would encroach onto steep slopes; however, the encroachment is less than allowed by the RPO. The Project also incorporates environmental design considerations to reduce impacts related to erosion, siltation and fire hazard (refer to Chapter 7.2).	Yes
2. Control development to assure a minimal adverse polluting effect on reservoirs, lakes, rivers, streams and groundwater supplies.	The Proposed Project would be required to conform to erosion and stormwater requirements under NPDES through the preparation of a SWPPP. The Project Applicant has prepared a SWMP, in conformance with the County of San Diego Watershed Protection, Stormwater Management and Discharge Control Ordinance/Stormwater Standards Manual, and will be required to implement all proposed BMPs.	Yes
3. Protect life and property by regulating use of areas subject to flooding, landslides, high fire hazard, and high earthquake potential.	No proposed buildings would be located in areas subject to flooding. There also are no known faults or landslide areas on the Project site. The Project has prepared a FPP and the project design incorporates recommendations of the FPP including fuel modification zones and fire walls that buffer areas that abut potential flammable habitat areas. In addition, all structures would be designed and built to meet IBC requirements to minimize earthquake damage.	Yes

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego General Plan – Open Space Element (cont.)		
Open Space Design of Private Lands (cont.) **Objectives of Goal II - Conservation of Resources and Natural Processes** 4. Encourage the conservation of vegetation and trees needed to prevent erosion, siltation, flood and drought and to protect air and water quality. 5. Encourage the conservation of the habitats of rare or unique plants and wildlife.	The Proposed Project has been designed to minimize the removal of native vegetation and impacts to the most sensitive habitats, as discussed below. Where grading must occur, the Project would implement a SWPPP and SWMP during grading and construction, and implement the SWMP throughout the life of the Project . These plans include implementation of many BMPs to prevent erosion and siltation. The Project would also implement a Landscape Plan to also prevent erosion and siltation and protect water quality. The Proposed Project would preserve five sensitive plant communities including coast live oak woodland, Diegan coastal sage scrub (including disturbed), coastal sage-chaparral scrub, coyote brush scrub and non-native grassland. The Project also would preserve 0.1 acre of eucalyptus woodland on site. These plant communities provide habitat for some sensitive animals, including coastal California gnatcatcher and raptors. The on-site dedicated biological open space would include the majority of the SPA (75.7 acres [66 percent of site]). Refer to Subchapter 2.2, Biological Resources.	Yes
6. Encourage the use of minor natural watercourses as local open spaces.	The proposed main access road in the north-central portion of the Project site would impact 170 linear feet (320 square feet) of drainage that is considered an ephemeral ACOE jurisdictional non-wetland Waters of the U.S. and a CDFG jurisdictional streambed. The remainder (and majority) of the jurisdictional areas on site would be retained in open space. Buena Creek would not be impacted by the proposed Cleveland Trail improvements, as the existing roadway dip section and culvert would be retained in their current condition (water and sewer pipelines would be installed through existing concrete, above the culvert).	Yes

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego General Plan – Open Space Element (cont.)		
Open Space Design of Private Lands (cont.) **Objectives of Goal IV - Distinguish and Separate Communities**		
14. Encourage sound environmental planning practices in all developments.	The Proposed Project is required to complete this EIR, and has proposed mitigation for all identified environmental impacts and addressed compliance with ordinances that address environmental matters.	Yes
County of San Diego General Plan – Regional Land Use Element		
2. Land Use Goals		
2.3 Retain the rural character of non-urban lands.	The proposed on-site residential development would include 45 single-family homes on lots ranging from 0.5 to 1.73 acres in size. Although somewhat smaller in area on average than the surrounding area, the lots would allow for the same or similar agricultural use types as adjacent neighborhoods. By clustering the proposed development in the southwestern portion of the Project site, a 77.1-acre open space area would be created around the homes, fostering a rural atmosphere.	Yes
2.6 Ensure preservation of contiguous regionally significant open space corridors.	Land to the east and south of the Project site is undeveloped and is part of a larger habitat area for plant and animal species. Wildlife can use most habitats on site and can access habitats off site without restriction at this time. The Open Space proposed by the Project is designed to maintain connectivity of preserved habitats on site with large off-site undeveloped lands to east and south. With the preservation of the majority of the habitat on site and clustering of homes in the southwest corner of the site, significant effects to wildlife corridors in the Project vicinity are not anticipated.	Yes

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego General Plan – Regional Land Use Element (cont.)		
3. Environmental Goals		
3.1 Protect lands needed for preservation of natural and cultural resources; managed production of resources; and recreation, educational, and scientific activities.	The Project proposes placing 77.1 acres into open space that will preserve sensitive habitats. No historic resources were identified on the Project site.	Yes
3.2 Promote the conservation of water and energy resources.	The proposed landscape concept includes drought-tolerant and native species to reduce water consumption for irrigation, which also would reduce energy use. Proposed homes would include energy-efficient construction and appliances per the IBC. The Project also would install energy efficient (sodium) street lighting. Additional energy-saving methods are stated in Subchapter 7.2.	Yes
3.3 Achieve and maintain mandated air and water quality standards.	The aggregate construction and operational emission levels produced by the Proposed Project would not exceed air quality standards for any of the identified criteria pollutants, and no localized cumulative exceedances of CAAQS standards were indicated. BMPs implemented by the Project Applicant during construction and post-construction activities would ensure that water quality standards would be achieved and maintained. Refer to Subchapter 3.1.2, Air Quality, and Subchapter 3.1.5, Hydrology and Water Quality, of this EIR for further details.	Yes
4. Capitol Facilities Goals		
4.1 Assure efficient, economical, and timely provision of facilities and services for water, sewer, fire protection, schools and roads to accommodate anticipated development.	The planning and design of the Proposed Project has involved the early cooperation and coordination of the required providers of public services and utilities. The final approval of all proposed discretionary actions and permits for on-site improvements, as well as the proposed off-site roadway improvements, would be predicated on the assurance of efficient, economical, and timely provision of required public services and utilities. The applicant will be conditioned to install necessary water lines, sewer lines, roads, pay school fees, and fullfill requirements of the Vista Fire Protection District prior to accommodate the proposed residential development.	Yes

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego General Plan – Regional Land Use Element (cont.)		
6. Housing and Social Goals 6.3 Assist the private sector in the provision of sufficient housing units in the unincorporated area to accommodate regional population projections endorsed by the Board of Supervisors.	The Proposed Project would provide an additional 45 housing units in the unincorporated NCM Subregional Plan area, which would help to accommodate projected growth for this area.	Yes
Policy 1: Regional Categories Policy 1.3 – Estate Development Area (EDA)	See the discussion above in Section 3.1.4.2, Analysis, County General Plan and NCM Subregional Plan.	Yes, With GPA Approval
Policy 2 – Land Use Designations and Use Regulations **Policy 2.4 – Non-urban Residential Designations** (17) Estate Residential	See the discussion above in Section 3.1.4.2, Analysis, County General Plan and NCM Subregional Plan.	Yes

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego General Plan – Recreation Element		
Local Parks Standard An overall standard of 15 acres of local parks per 1,000 people is recommended. **Regional Parks Standard** The generally accepted standard for regional park requirements is 15 to 20 acres per 1,000 people.	The applicant is not proposing park land dedication, but will pay fees in lieu of dedication pursuant to the County's Park Land Dedication Ordinance.	Yes

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego General Plan – Seismic Safety Element		
Goals 1. Minimize injury and loss of life. 2. Minimize damage to public and private property. 3. Minimize social and economic dislocations resulting from injuries, loss of life and property damage. **Policies on New Development** It is the policy of the County of San Diego to: 1. Require all buildings to meet the standards of the [International] Building Code. 5. Prohibit construction of homes and essential facilities in hazardous areas unless they can be designed to reduce the hazard to the satisfaction of responsible agencies. 7. Require submission of soils and geologic reports prepared by a certified engineering geologist on all projects where geologic hazards are known or suspected to be present.	Based the geotechnical analysis, potential Project-related impacts associated with seismic hazards were determined to be less than significant. Specifically: (1) no active or potentially active faults are known or expected to occur within the site or vicinity; (2) the Project would conform with IBC and other related requirements; (3) the potential for liquefaction and related effects (e.g., settlement and lateral spreading) is low, based on the dense nature of underlying materials and the lack of a near-surface permanent groundwater table; (4) while steep slopes are present on site, substantial landslides were not observed on site or within the vicinity and/or are not expected to represent significant hazards; and (5) the Proposed Project would incorporate applicable seismic loading and design measures identified in the geotechnical analysis and regulatory guidelines (e.g., the ASTM and IBC). The Project would not be constructed within a "hazardous area."	Yes
County of San Diego General Plan – Scenic Highway Element		
Objectives 2. Protect and enhance scenic resources within designated scenic highway corridors.	Refer above in this table to Policy 18 of Land Use in the NCM Subregional Plan.	Yes

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego General Plan – Noise Element		
Policies - Receiver Site Standards and Controls 4b. Because exterior community noise equivalent levels (CNEL) above 60 dB and/or interior CNEL above 45 dB may have an adverse effect on public health and welfare, it is the policy of the County of San Diego that: 1. Whenever it appears that new development may result in any (existing or future) noise sensitive land use being subject to noise levels of CNEL equal to 60 dB(A) or greater, an acoustical analysis shall be required. 2. If the acoustical analysis shows that noise levels at any noise sensitive land use will exceed CNEL equal to 60 dB, modifications shall be made to the development which reduce the exterior noise level to less than CNEL of 60 dB(A) and the interior noise level to less than CNEL of 45 dB(A).	An Environmental Noise Assessment is completed for the Proposed Project. With regard to operation of the proposed development, noise levels would be below the stated policy thresholds. During the construction phase of the Project, however, some off-site residences may be exposed to noise levels above the exterior and interior thresholds. This impact would be temporary, and also would be mitigated to less than significant levels through the use of quieter construction equipment, reduced construction hours, or (in the case of Cleveland Trail) sound attenuation barriers. Refer to Subchapter 2.4, Noise, for further detail.	Yes

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego General Plan – Noise Element (cont.)		
3. If modification are not made to the development in accordance with paragraph 2 above, the development shall not be approved unless a finding is made that there are specifically identified overriding social or economic considerations which warrant approval of the development without such modification; provided, however, if the acoustical study shows that sound levels for any noise sensitive land use will exceed a CNEL equal to 75 dB(A) even with such modifications, the development shall not be approved irrespective of such social or economic considerations.		

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego General Plan – Housing Element		
Goal 1. Assist housing developers, including non-profit and community development organizations, to ensure that new residential construction will be available to meet the needs of the region if adequate public services and facilities are in place. Housing should be available in a variety of styles, tenancy types, and prices throughout the region.	The Project proposes 45 residential lots ranging in size from 0.5 to 1.73 acres.	Yes
County of San Diego General Plan – Conservation Element		
Policies – Water 4. Reduce local reliance on imported water.	The proposed landscape concept includes drought-tolerant and native species to reduce water consumption for irrigation, which also would reduce energy use.	Yes

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego General Plan – Conservation Element (cont.)		
10. Storm drain runoff should be planned and managed to minimize water degradation, to reduce the waste of fresh water, to enhance wildlife and to reduce the impact of erosion.	Potential long-term water quality impacts associated with the Project include the generation and off-site discharge of urban contaminants. Urban contaminants accumulate primarily in streets, driveways and drainage facilities, and are picked up in runoff during storm events. Post-development peak 100-year storm runoff within and from the site is projected to decrease locally with a corresponding decrease in runoff loading potential. The potential for transport of urban contaminants from the Project site to downstream receiving waters, has been addressed through the preparation of a SWMP and incorporation of associated BMPs as Project environmental design measures. A summarized list of applicable site design, source control and treatment control BMPs and related monitoring/maintenance efforts identified in the Project SWMP is provided in Subchapter 3.1.3, Hydrology and Water Quality. Implementation of an approved SWMP as part of the Project design would avoid or reduce potential long-term water quality impacts to less than significant levels. It should also be noted that the Proposed Project is exempt from the Interim Hydromodification Criteria identified in County storm water requirements and the NPDES Municipal Permit, based on the fact that the Project would disturb less than 50 acres.	Yes
14. Prior to the approval of tentative maps, a letter must be provided by all affected sewage treatment agencies indicating the current unencumbered capacity and existing total capacity of their major facilities. For projects requiring an environmental impact report, this information must be a part of this report.	The Project Applicant has received Conditions of Approval from the BSD, indicating that facilities and services are available to serve the Proposed Project (contained in Appendix L). The Project would extend sewer lines to the site as anticipated by the BSD Master Plan. No issues with regard to wastewater treatment capacity have been identified by the BSD. Refer to Section 3.2.12, Utilities and Service Systems, for additional details.	Yes

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego General Plan – Conservation Element (cont.)		
Policies - Vegetation and Wildlife Habitats 3. The County will use the EIR process to identify, conserve and enhance unique vegetation and wildlife resources.	Refer to previous discussions in this table under Objectives 4 and 5 of Goal II and Objective 14 of Goal IV under the heading Open Space Element, Goal 4 of the NCM Subregional Plan, and Goal 3.1 of the Regional Land Use Element. Refer to Subchapter 2.2, Biological Resources, for additional details.	Yes, With Project Mitigation
5. San Diego County shall encourage the use of native plant species in review of landscaping and erosion control plans for public and private projects.	The final Landscape Plan approval will include the use of native and/or drought tolerant plants and be in conformance with the County's Landscape Water Conservation Design Manual to reduce irrigation requirements and minimize associated potential runoff generation (including soil erosion).	Yes
Policies - Vegetation and Wildlife Habitats (cont.) 6. If a project is determined to have a significant adverse impact on plants or wildlife, an acceptable mitigating measure may be a voluntary donation of land of comparable value to wildlife. 9. When significant adverse habitat modification is unavoidable, San Diego County will encourage project designers to provide mitigating measures in their designs to protect existing habitat.	Mitigation for significant impacts to habitat and sensitive animal species includes the preservation of approximately 54 acres of sensitive habitat on site. The Project also would set aside approximately 22 acres additional of sensitive habitat to on-site dedicated open space. The open space area would preserve sensitive plant and animal species, as discussed above in Policies 2 and 3 of Vegetation and Wildlife Habitats under the Conservation Element of the County General Plan.	Yes, With Project Mitigation

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego General Plan – Conservation Element (cont.)		
13. Flood control measures shall, whenever practical, utilize natural floodways and floodplains, maintaining riparian habitats and historic stream flow volumes. No structures or excavations which adversely affect floodplain vegetation and wildlife, or decrease their value as migration corridors, should be permitted.	Implementation of the Proposed Project would result in the addition of impervious surfaces including pavement and structures. The Project, however, would include three detention/bioretention basins that would regulate the post-development flows prior to off-site discharge, and would result in a net reduction of 100-year flow volumes.	Yes
Policies - Vegetation and Wildlife Habitats (cont.) 16. The County will regulate major land clearing projects to minimize significant soil erosion, destruction of archaeological, historic and scientific resources and endangered species of plants and animals.	Proposed Project grading, excavation, and construction activities would increase the potential for erosion and transport of material both within and downstream of the site. The Project would conform to erosion requirements under the NPDES by the preparation of a SWPPP and through conformance with the SWMP as required by the County's Watershed Protection Ordinance. Project impacts associated with erosion would be less than significant. The site does not contain any archaeological sites. On-site open space area would preserve sensitive plant and animal species, as discussed above under Policies 2 and 3 of Vegetation and Wildlife Habitats under Conservation Element of the County General Plan.	Yes
Policies – Soils 9. To prevent erosion and slippage in man-made slopes approved low maintenance trees, bushes and grasses which establish themselves quickly should be planted.	Manufactured slopes would be vegetated pursuant to an approved Landscape Plan in part to prevent erosion.	Yes

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego General Plan – Conservation Element (cont.)		
10. The County will regulate major land clearing projects to minimize significant soil erosion, destruction of archaeological historic and scientific resources and endangered species of plants and animals.	The site does not contain any known archaeological sites. Refer above to Policy 16 of Vegetation and Wildlife Habitats under Conservation Element, and Objective 5 of Goal II under Open Space Element of the County General Plan with regard to plants and wildlife, and refer to Objective 4 of Goal II of Open Space Design of Private Lands under the Open Space Element and Policy 10 under the Conservation Element within the County General Plan with regard to erosion.	Yes, With Project Mitigation
Policies - Astronomical Dark Sky 1. The County of San Diego will act to minimize the impact of development on the useful life of the observatories.	The County has enacted an ordinance that restricts the use of outdoor lighting that emits undesirable light rays into the night sky. The primary intent of the code is to curb lighting that may affect astronomical research at the Mount Palomar and Mount Laguna observatories. Refer to the discussion concerning the County Light Pollution Code, below.	Yes
County of San Diego General Plan – Public Facility Element		
Policies - Coordinated Facility Planning 2.1. Assure that growth is limited to areas where adequate public facilities exist or can be efficiently provided. 2.2. Development projects will be required to provide or fund their fair share of all public facilities needed by the development.	The Project Applicant has involved the appropriate public service and utility agencies (as well as the County) in planning and coordinating the required public facilities for the Project. Necessary new or improved public facilities have been incorporated into the Project, including water, sewer, electricity and communications. The Project Applicant has received Project Facility Availability Forms from VID, BSD, Vista Unified School District and VF PD, all of which have indicated that facilities and services would be available (refer to Appendix L). The Project Applicant has identified all necessary public facilities and would be required to make physical improvements, pay any necessary fees, and conform to any District requirements to implement the Project. Therefore, the Proposed Project would be in compliance with the facility planning policies.	Yes

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego General Plan – Public Facility Element (cont.)		
Policies – Transportation 1.1. New development shall provide needed roadway expansion and improvements on-site to meet the demand created by the development and to maintain an LOS C on on-site Circulation Element Roads during peak traffic hours. New development shall provide off-site improvements designed to contribute to the overall achievement of an LOS D on Circulation Element Roads. 2.1. New development shall be required to contribute its fair share toward financing transportation facilities.	The Project would be required to improve roadway segments and intersections as mitigation for significant direct and cumulative Project traffic impacts. Project mitigation for traffic impacts would include extension and construction of turn lanes, participation in the County TIF program, provision of payment toward the City of San Marcos PFF fee program for improvements to Buena Creek Road, Twin Oaks Valley Road and Deer Springs Road, and contribution of a fair share to the City of Vista for upgrades to SR 78 and Sycamore Avenue eastbound ramps. With such improvements and contributions, traffic impacts would be reduced to less than significant levels. See Chapter 2.4 Transportation/Traffic for further details.	Yes, With Mitigation
Policies - Law Enforcement 3.2. New development in the unincorporated area will be required to contribute its fair share toward financing sheriff facilities toward achieving the short term objective.	A fair share impact fee program for sheriff facilities/services has not been developed by the County. Expanded police protection staff and services would be funded from increased property taxes and other revenues to the County resulting from the Proposed Project as well as from other cumulative developments in the Project area that contribute to the increased demands on police protection services.	Yes

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego General Plan – Public Facility Element (cont.)		
Policies - Animal Control 4.1 New development shall be required to contribute its fair share toward financing animal control facilities to achieve the short term objective of providing 0.13 square feet of shelter space per dwelling unit.	The development of 45 residences would generate the need for six square feet of animal shelter space pursuant to Objective 1 of Section 8 of the Public Facilities Element. Expanded animal control services and animal shelter space would be funded from increased property taxes and other revenues to the County resulting from the Proposed Project as well as from other cumulative developments in the Project area that contribute to the increased demands on animal control services.	Yes
Objectives – Libraries 2. Equitable sharing of funding for library facilities by unincorporated communities and all cities in the County Library's service area, and by all new development that will benefit from the facilities.	Expanded library facilities would be funded from increased property taxes and other revenues to the County resulting from the Proposed Project as well as from other cumulative developments in the Project area that contribute to the increased demands on library services.	Yes

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego General Plan – Public Facility Element (cont.)		
Objectives – Schools 1. Provision of educational facilities sufficient to meet the demands of new development concurrent with need. **Policies - Schools** 1.2. To the extent allowable under State law, new development shall be required to provide additional facilities needed to serve children generated by the new development. Such facilities shall be of the quality and quantity sufficient to meet State Department of Education standards or to maintain an existing higher level of service provided by an affected school district's facilities. 3.1. Land use planning will be coordinated with the planning of school facilities.	The Project Applicant would pay their fair share of development impact fees to the school district. Therefore, the Proposed Project would not have a significant impact on school services.	Yes

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego General Plan – Public Facility Element (cont.)		
Objectives - Fire Protection and Emergency Services 1. Sufficient fire and emergency services facilities to meet established emergency travel time objectives to minimize fire and emergency risk. Maximum travel time to the Proposed Project will be five minutes, based on proposed land use.	Fire protection service to the Project site would be provided by VFPD. The nearest fire station to the Project site is Vista Fire Station 2, which is approximately two miles (driving distance) west of the Project site. The Vista Fire Protection District has provided a service availability form that indicates existing fire services are available to service the Proposed Project. The required response time for residential lots smaller than two acres in size is five minutes or less. The anticipated total travel time from Vista Fire Station 2 to the farthest house within the proposed development would be no more than five minutes.	Yes
Policies - Fire Protection and Emergency Services 1.2. The County will ensure the availability of adequate fire and emergency services facilities in the review of discretionary land development applications, and require appropriate fire prevention and protection measures. 2.1. New development shall be required to finance its full and fair share of the facility and equipment needs that it generates.	A service availability form has been provided that indicated existing services are available to the Project from the VFPD.	Yes

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego General Plan – Public Facility Element (cont.)		
Policies – Wastewater 1.2. Discretionary land development projects will only be approved if the service provider reasonably expects that wastewater treatment and disposal will be available concurrent with need, and that all appropriate requirements will be met through conditions placed on project approval.	The Proposed Project would require wastewater management service from the BSD. A project facility availability form from the district indicates that the Project could be served. The Project would extend sewer lines into the project site as anticipated by BSD's Master Plan.	Yes
Policies - Water Provision Systems 1.2. Discretionary land development projects dependent on imported water will only be approved if the service provider reasonably expects that water facilities will be available concurrent with need, and that all appropriate requirements will be met through conditions placed on project approval. 1.3. All land development projects requiring the use of imported water shall obtain a commitment of service by the appropriate district prior to land preparation and construction.	The Proposed Project would require water service from the VID. A Service Availability Letter from the Vista Irrigation District has been provided, indicating adequate water resources and entitlements are available to serve the requested water resources. No new or expanded entitlements have been required. Refer to Section 3.2.12, Utilities and Service Systems, for further details.	Yes

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego General Plan – Public Facility Element (cont.)		
Policies - Courts and Jails 1.1. The County will seek regional cooperation on appropriate requirements for new development throughout the County to contribute its fair share of funding for County court and jail facilities related to the needs of the new development.	Expanded County court and jail facilities would be funded from increased property taxes and other revenues to the County resulting from the Proposed Project as well as from other cumulative developments in the Project area that contribute to the increased demands on court and jail facilities.	Yes
Policies – Health 4.1. The County will seek regional cooperation on appropriate requirements for new development throughout the County to contribute its fair share of funding for County health care facilities related to the needs of the new development.	Expanded County health care facilities would be funded from increased property taxes and other revenues to the County resulting from the Proposed Project as well as from other cumulative developments in the Project area that contribute to the increased demands on health care facilities.	Yes
County of San Diego Zoning Ordinance		
The County Zoning Ordinance identifies the permitted uses of the project site, consistent with the land use designations of the General Plan.	The Project site currently is zoned A70, Limited Agriculture, which creates and preserves areas intended primarily for agricultural crop production. One dwelling unit per two acres is allowed in the A70 zone. The Project Applicant has applied for a rezone to change the zoning designation of the Project site from A70 to S88, Specific Planning Area, with a minimum lot size of 0.5 acre and a density of 0.39 dwelling unit per acre. The S88 zone provides for all uses as set forth by an adopted specific plan. The Proposed Project would comply with all development regulations associated with the proposed S88 designation. The existing zoning of the Project site allows for structure heights of up to 35 feet (two stories). The proposed zoning would change the maximum allowable height of structures to 30 feet (two stories).	Yes, With Rezone Approval

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego Zoning Ordinance (cont.)		
	In addition, the allowable setback distances under the existing zoning designation are 60 feet for the front yard from centerline of road, 15 feet for the interior side yard, 25 feet for the rear yard and 25 feet for the exterior side yard. The proposed zoning designation would alter the allowable setback to "V," within which the Zoning Ordinance states that "setbacks to be established during planned development, use permit or site plan review." According to the Specific Plan for the Proposed Project, front yard setbacks would be 41 or 46 feet, depending on the use of side- or front-loaded garages, respectively. (A side-loaded garage would require the smaller setback.) Lots along the western boundary adjacent to the Lone Oak Lane neighborhood would require a 100-foot rear yard setback for increased privacy to the existing neighborhood. Lots along the eastern and southern edge of development adjacent to open space would require either 100- or 125-foot rear yard setback as specified by an approved FPP. Animal regulations and building types under the existing and proposed zoning designations would be the same.	
County of San Diego Subdivision Ordinance		
The County Subdivision Ordinance is contained within Title 8, Division 1 of the San Diego Code of Regulatory Ordinances and sets forth development standards for the subdivision of land with respect to design, dedication and access, and required improvements.	The Proposed Project is in conformance with the County Subdivision Ordinance. The County has reviewed the Tentative Map and concurred that all lots are in conformance.	Yes

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County Resource Protection Ordinance		
The County RPO provides development controls for unique topography, ecosystems and natural characteristics within the County deemed to be fragile, irreplaceable and vital to the general welfare of the County's residents. The resources protected by the County include wetlands, floodplains, steep slopes, sensitive biological habitats, and prehistoric and historic sites. Additionally, the County requires avoidance of impacts to 80 percent of County Group A and B sensitive plants.	Steep Slopes. The Proposed Project has been designed to retain almost all on-site steep slopes (natural slopes with a gradient of over 25 percent slope and a height exceeding 50 feet) in open space. There are two proposed residential lots (11 and 33) that contain steep slopes; however, proposed encroachment would be 8.07 and 8.57 percent, respectively, neither of which is over the 10 percent allowable encroachment. Sensitive Habitat Lands. The Project site contains 1.0 acre of high sensitivity habitat (coast live oak woodland), 94.4 acres of moderate sensitivity habitat (Diegan coastal sage scrub [including disturbed], coastal sage-chaparral scrub and coyote brush scrub) and 13.5 acres of low sensitivity habitat (non-native grassland). Impacts to these habitats would be mitigated at appropriate ratios, for a total preservation on site of 75.7 acres of open space sensitive habitat, including 1.3 acres of coast live oak woodland and 70.7 acres of coastal sage scrub. No net loss of coast live oak woodland would occur due to Project development; in fact, the Project would result in a net gain following implementation of mitigation due to creation. Implementation would reduce impacts to sensitive habitats to less than significant levels. Refer to Subchapter 2.2, Biological Resources, for additional detail. Wetlands. No RPO wetlands are located on the Project site; however, an RPO wetland does occur along Cleveland Trail. Improvements proposed for this access road and associated pipeline installation, however, would not result in impacts to any RPO wetlands. Wetland Buffers. Cleveland Trail is an existing road that provides access to existing residences. Installation of the proposed eight-inch sewer line approximately 30 feet from the freshwater marsh would not impact RPO wetland buffers because the segment that diverges from Cleveland Trail would occur using the jack-and-bore technique, which would not disturb the vegetation or affect the ground surface. Runoff would continue to enter the freshwater marsh without impediment or increased siltation. All other improvements in this area would occur within the existing disturbance footprint of Cleveland Trail, and thus would not constitute a new use adjacent to existing RPO wetland habitat.	Yes, With Mitigation

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County Resource Protection Ordinance (cont.)		
	Floodways. Although Cleveland Trail crosses Buena Creek, the proposed off-site improvements to this roadway would be limited to resurfacing the existing roadway footprint, with no associated excavation, grading, alteration of existing drainage facilities or placement of structures/facilities that would potentially obstruct flows and/or impact the extent or elevation of surface waters. No impacts would occur to the floodway. Floodplain Fringe. The northwestern-most corner of the Project site is located within mapped 100- and 500-year floodplains associated with Buena Creek. This portion of the site is not within the proposed development area and would be preserved as permanent open space. No impacts would occur to the floodplain fringe within the Project site, as no on-site development is proposed within such a resource. Floodplain fringe would be impacted, however, by construction of improvements to Cleveland Trail. Such improvements would be allowable in the floodplain fringe because they would meet the criteria outlined in the RPO (refer to Section 3.1.4.2, under the heading "County Resource Protection Ordinance"). Significant Prehistoric or Historic Sites. No known RPO prehistoric or historic sites are located within the Project development footprint; therefore, none would be impacted by implementation of the Proposed Project. Monitoring during grading would ensure that no unknown impacts occur.	

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
County of San Diego Light Pollution Code		
The LPC is a County Regulatory Ordinance that restricts the use of outdoor lighting that emits undesirable light rays into the night sky. The primary intent of the code is to curb lighting that may affect astronomical research at the Mount Palomar and Mount Laguna observatories. The LPC defines two zones in the unincorporated portion of San Diego County. Zone A consists of areas within a 15-mile radius of Mount Laguna and Mount Palomar. Zone B pertains to all areas remaining, which are not defined as Zone A.	The Project site is located within Zone B under the LPC. The LPC defines two zones in the unincorporated portion of San Diego County. Zone A consists of areas within a 15-mile radius of Mount Laguna and Mount Palomar. Zone B pertains to all areas remaining, which are not defined as Zone A. The Project site is located within Zone B. The LPC contains policies restricting the use of outdoor lighting to minimize light spill over into the dark night sky and adjacent neighborhoods. In compliance with these policies, all exterior lighting associated with the proposed homes would be directed and shielded. Therefore, Project lighting would be consistent with the LPC. It is also anticipated that street lighting necessary to meet safety lighting requirements in accordance with Section 5.8, "Roadway Lighting," Table 3 of the Public Road Standards, would result in approximately six low pressure sodium street lights on the Project site. These lights would also need to meet LPC Zone B requirements.	Yes

Table 3.1.4-1 (cont.)
LAND USE PLANS AND POLICIES CONSISTENCY EVALUATION

Applicable Goals and Policies	Project Compliance	Consistent? (Yes/No)
Natural Community Conservation Planning Program		
Regional conservation planning strategies under the California ESA providing protection, preservation and conservation of listed and candidate species, their habitats, natural communities and natural resources, while continuing to allow appropriate development and growth within the State, are authorized and implemented under the Natural Community Conservation Planning (NCCP) Act of 1991. These strategies are designed to provide protection and conservation to threatened and endangered species through multi-species, habitat-based and long-term approaches that ensure both the conservation of, and net benefits to, the affected species, as well as allow for growth.	The Project site is not within the boundaries of an adopted HCP/NCCP. It is, however, within the boundaries of the draft North County MSCP, a preliminary draft of which was released for public review on February 19, 2009. Approximately 93 acres of the western portion of the site are within the proposed PAMA under that plan, as illustrated on Figure 2.2-5. Development would be clustered in the southwestern corner of the site and adjacent to existing developed areas, in an effort to minimize impacts to sensitive biological resources. Implementation of the Proposed Project would impact approximately 39 acres of land identified as PAMA in the draft North County MSCP. The proposed clustering of houses preserves the functions and values of habitat and minimizes impacts to sensitive habitats and species. The Proposed Project would not preclude or prevent preparation of the subregional NCCP (in this case, the North County MSCP). The only listed species present on site is the coastal California gnatcatcher. The Project would not cause direct impacts to this species and would be conditioned to avoid noise impacts to nesting gnatcatchers during the breeding season. Direct impacts to migratory bird nests and/or eggs also would be avoided as a matter of law. The Project would impact ~~23.1~~23.7 acres of coastal sage scrub. These impacts would be mitigated at a 2:1 ratio (~~46.2~~47.4 acres) in accordance with the NCCP Guidelines, and the Project would preserve a total of 70.7 acres of coastal sage scrub within on-site biological open space. The Project Applicant would be required to obtain an HLP, Section 10 permit or Section 7 authorization from USFWS for take of coastal California gnatcatcher habitat. The Proposed Project would conform to the goals and requirements of the HLP Ordinance. Based on this information, the County would be able to make the following required HLP findings: (1a) the habitat loss does not exceed the five percent guideline; (1b) the habitat loss will not preclude connectivity between areas of high habitat values; (1c) the habitat loss will not preclude or prevent the preparation of the subregional NCCP; (1d) the habitat loss has been minimized and mitigated to the maximum extent practicable; (2) the habitat loss will not appreciably reduce the likelihood of survival and recovery of listed species in the wild; and (3) the habitat loss is incidental to otherwise lawful activities.	Yes

Table 3.1.4-2
CUMULATIVE LAND USE PROJECTS

No.	Project Name	Project Number	Jurisdiction	Status	Type of Project	Project Characteristics
35	Merriam Mountains Specific Plan	GPA 04-06, SP 04-06, R04-013, TM 5381, S04-035, S04-036, S04-037, S04-038	County of San Diego	UR	SP	Master-planned community with residential, commercial, recreational and open space land uses. Maximum of ~~2,391~~2,630 dwelling units within the 2,320-acre Specific Plan area.
79	Orchard Hills GPA	TM 5533, GPA 07-006, REZ 07-003	County of San Diego	UR	RES	Subdivide a 12.54-acre parcel into 23 residential lots.
MAXIMUM NUMBER OF DWELLING UNITS						**~~2,414~~2,653**

RES = Residential; SP = Specific Plan; UR = Under Review
* Project-related issues include land use.

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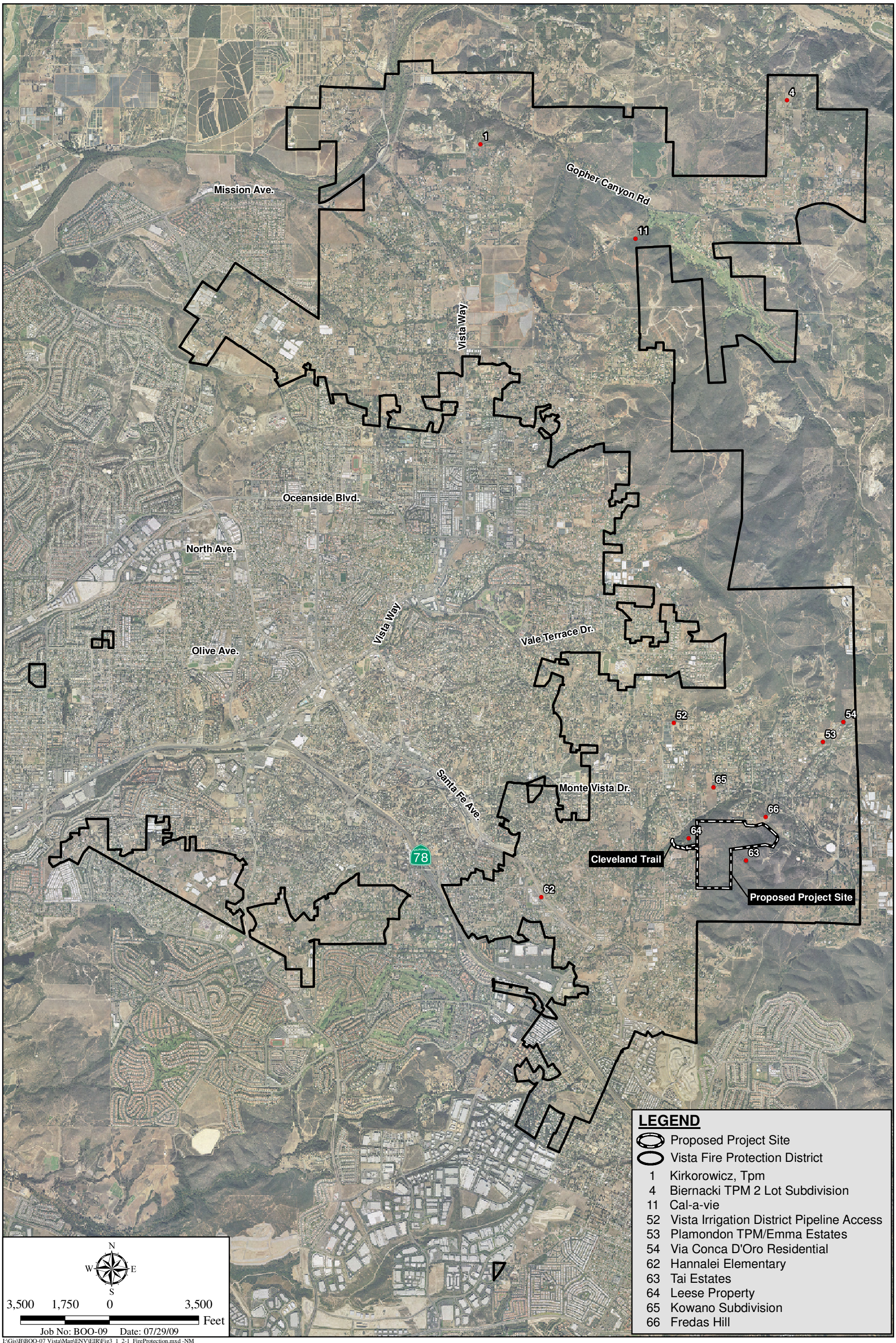

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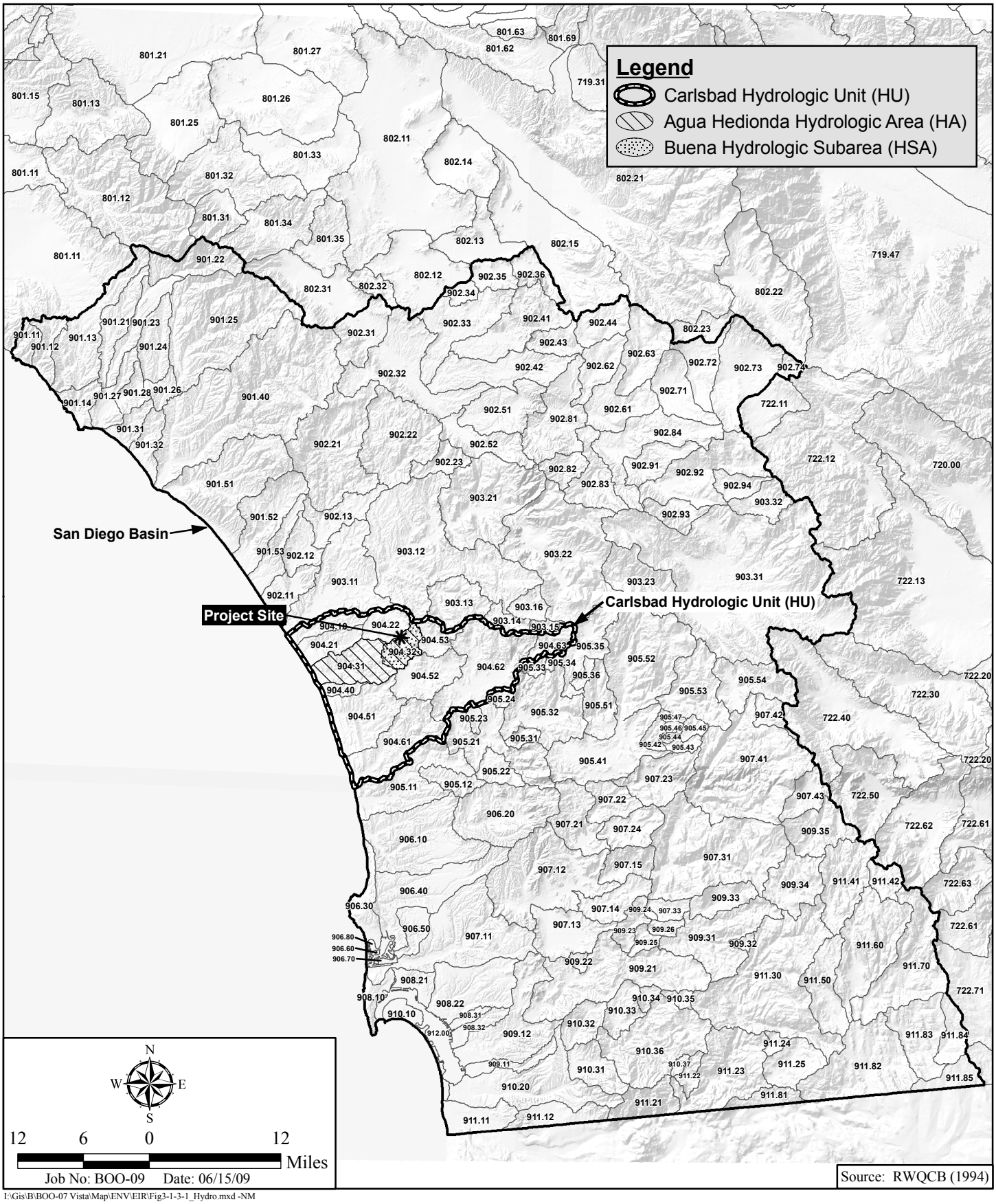
Cumulative Projects for Wildland Fire

SUGARBUSH RESIDENTIAL PROJECT

Figure 3.1.2-1



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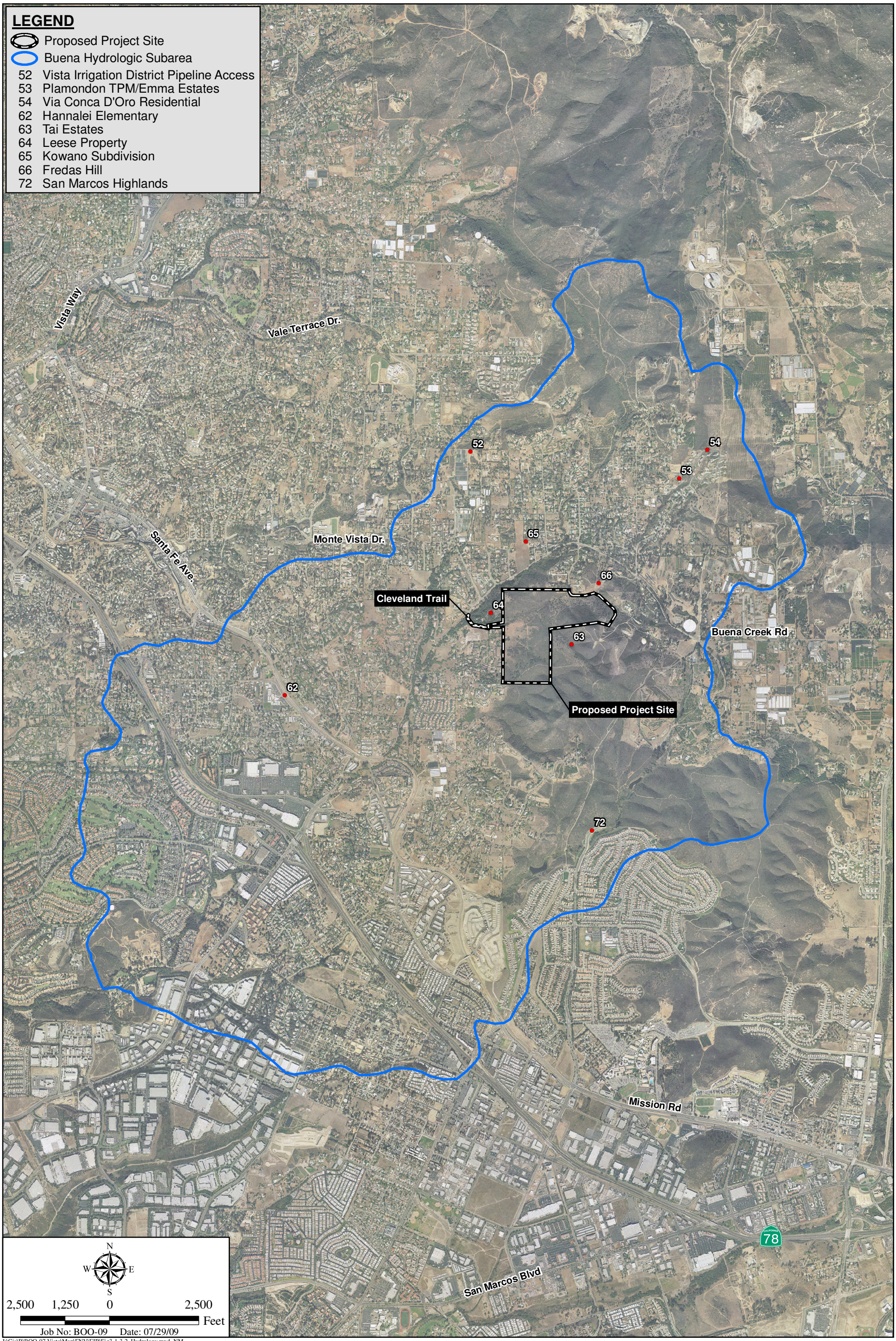
Project Location within Local Hydrologic Designations

SUGARBUSH RESIDENTIAL PROJECT

Figure 3.1.3-1



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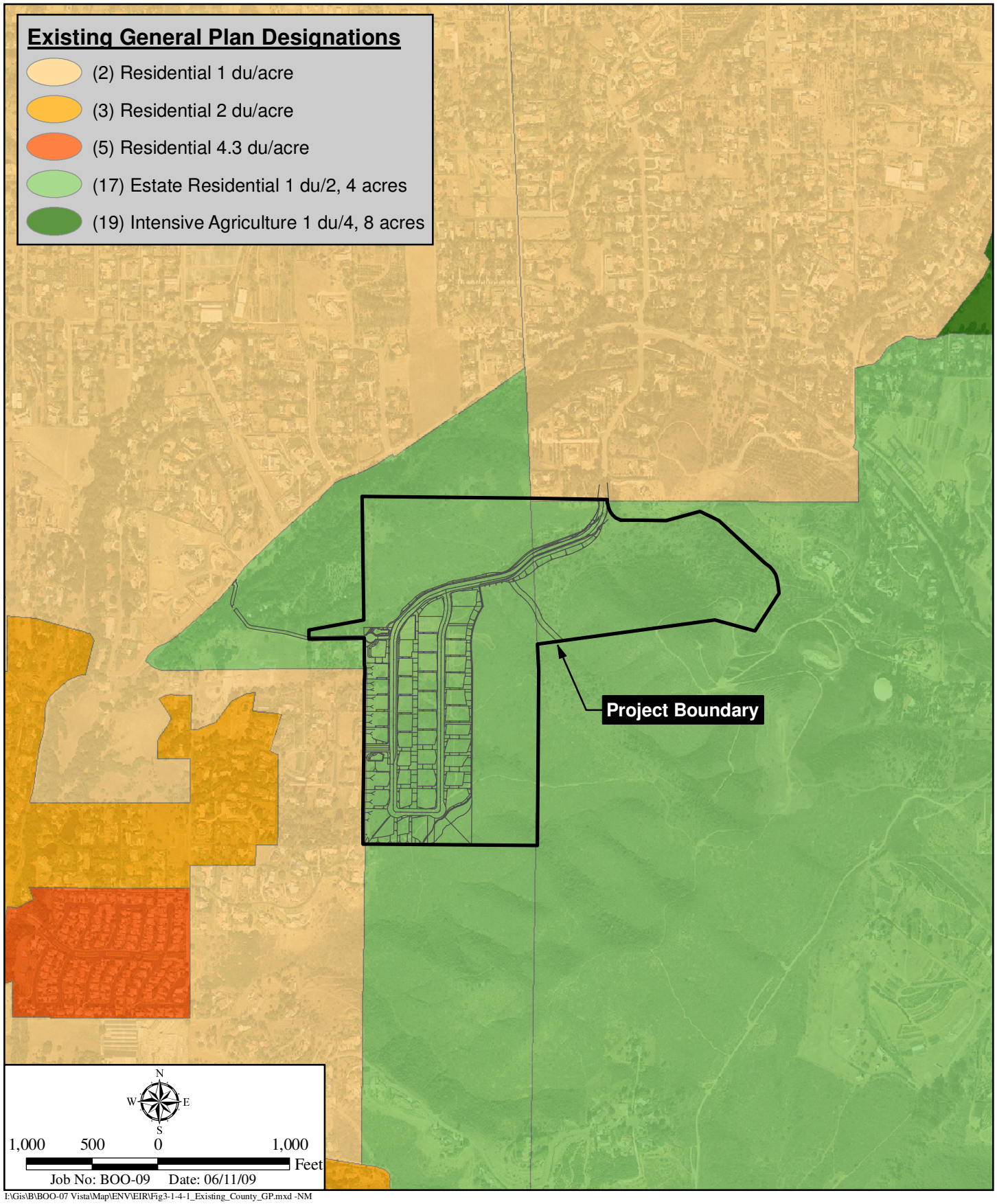
Cumulative Projects for Hydrology/Water Quality

SUGARBUSH RESIDENTIAL PROJECT

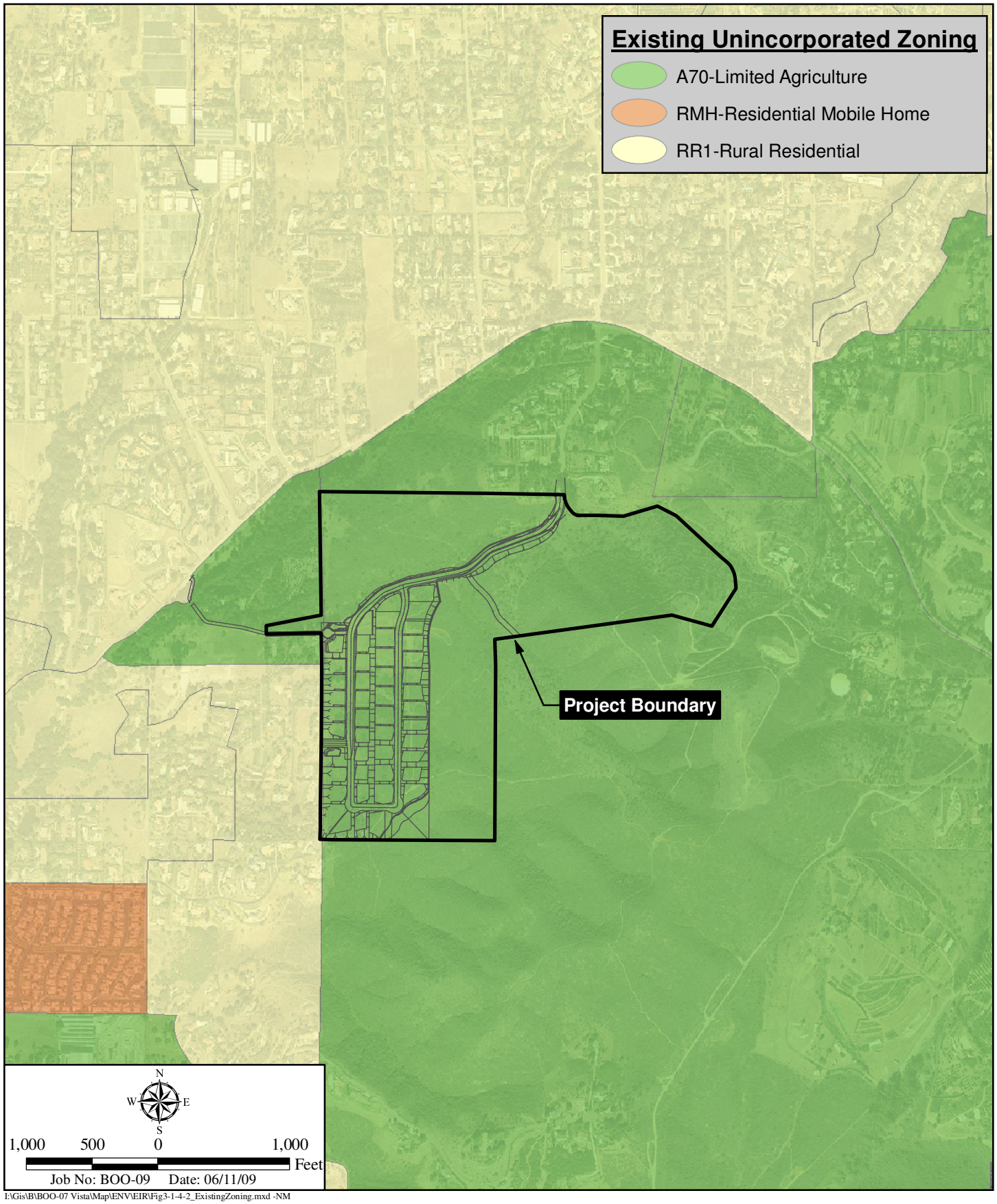
Figure 3.1.3-2



Existing County General Plan Land Use

SUGARBUSH RESIDENTIAL PROJECT

Figure 3.1.4-1



Existing Zoning

SUGARBUSH RESIDENTIAL PROJECT

Figure 3.1.4-2